

THE
FARMER'S TOUR
THROUGH THE
EAST of ENGLAND.

BEING

The Register of a Journey through various Counties
of this Kingdom, to enquire into the State
of AGRICULTURE, &c.

CONTAINING,

- | | | |
|---|--|--|
| I. The particular Methods of
cultivating the Soil. | | the Soil, and its Division into
Farms, with various Circum-
stances attending their Size
and State. |
| II. The Conduct of live Stock,
and the modern System of
Breeding. | | V. The Minutes of above five
hundred original Experiments,
communicated by several of
the Nobility, Gentry, &c. |
| III. The State of Population, the
Poor, Labour, Provisions, &c. | | |
| IV. The Rental and Value of | | |

WITH

Other Subjects that tend to explain the present State of
ENGLISH HUSBANDRY.

By the Author of the FARMER'S LETTERS, and the
TOURS through the North and South of England.

VOL. III.

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MDCC LXXI.

The Rights of a Woman, through various Counties
of the Kingdom, to be placed in the
of Agriculture, etc.

1. The existence of the
2. The existence of the
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9. The existence of the
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Other Subjects, that tend to explain the present state of
European History.



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C O N T E N T S
OF THE
THIRD VOLUME.

L E T T E R XIX.

*H*USBANDRY from Morden to
St. Mary's Cray, Page 1 to 17.

L E T T E R XX.

*H*usbandry from St. Mary's Cray to Can-
terbury. — Mr. Hilton's Trials. — Mr.
Jacob's in Planting. — Mr. Crowe's on
Madder, — — — 18 to 42.

L E T T E R XXI.

The Husbandry of East Kent and the Isle of
Thanet. — Sir Thomas Hales's Experi-
ments on Hops. — Mr. Taylor's. — Mr.
Reynolds's. — Mr. Harrison's. — Isle of
Thanet. — Observations on the Husbandry
of East Kent and the Isle of Thanet,
43 to 110.

L E T T E R XXII.

*H*usbandry from Sandwich to Rye,
110 to 117.

CONTENTS.

LETTER XXIII.

Husbandry through the County of Suffex.—

Mr. Poole's Experiments. — Mr. Holroyd's. — Mr. Vernon's Lucerne. — Mr. Nash's Experiment. — Mr. Turner's. — Mr. Bull's, — Page 117 to 177.

LETTER XXIV.

The Isle of Wight, — 178 to 202.

LETTER XXV.

Husbandry through Part of Hampshire.—

Mr. Rodney's Experiments. — Mr. Mitford's on Planting. — New Forest,

— 202 to 244.

LETTER XXVI.

Mr. Sturt's Experiments. — Critchill. —

Brownsea Island, — 245 to 270.

LETTER XXVII.

From Critchill to Dorchester. — Mr. Frampton's Experiments. — Mr. Mawde's. —

Dr. Lloyd's Lucerne, — 271 to 325.

LETTER XXVIII.

The Sheep Husbandry of Dorsetshire. — Mr.

Damer's Experiments. — Mr. Pleydell's.

Lord Milton's. — Observations on the Dorsetshire Husbandry, — 326 to 412.

LETTER XXIX.

Vale of Taunton. — Mr. Anderdon's Experiments, — 412 to 483.

THE
FARMER'S TOUR
THROUGH
ENGLAND.

LETTER XIX.

THE following is the state of the common husbandry about *Mordon*—in which parish Mr. *Arbutnot*'s farm is situated.

Farms from 50 acres to 500; in general about 140. The soil either clay, or a good strong loam on clay; lets on an average at 12s. Tythe 3s. and poor rates 2s. more. The courses of crops;

- | | |
|-------------------|-----------|
| 1. Fallow, dunged | 2. Wheat |
| for | 3. Beans. |

VOL. III.

B

2 THE FARMER'S TOUR

Also,

- | | |
|-----------|-----------------------|
| 1. Fallow | 4. Clover, dunged for |
| 2. Wheat | 5. Wheat |
| 3. Oats | 6. Oats. |

And,

- | | |
|------------|------------------|
| 1. Turnips | 4. Wheat |
| 2. Barley | 5. Winter tares. |
| 3. Clover. | |

Wheat produces on an average 3 quarters *per* acre; barley 4 quarters, and oats 5.

They have two ways of cultivating beans, one to sow them, and not to hoe; the produce 3 quarters. The other is to set them in rows 12 inches asunder and to hoe them, in which method they get 4 quarters: an argument in favour of hoeing that ought to extirpate the common method.—Of pease they do not get more than 2 quarters on a medium. Clover they mow twice for hay; and get at the two cuttings three loads an acre. The quantity of turnips sown is but trifling, nor do they value them at more than 30s. an acre. The winter tares are all used for soiling horses.—They bring from *London* much horse dung and some top dressings. Their yard dung is not made in large quantities, as their wheat straw

THROUGH ENGLAND. 3

straw is all fold—and they do not cut the stubbles.

They bring chalk from *Sutton*, 2 $\frac{1}{2}$ miles off; mix it with dung and earth: if they lay it on alone, they spread 12 loads an acre, at 4*d.* a load, and 3*s.* 8*d.* carriage; 4*s.* a load in all: it lasts 6 or 7 years.

In their tillage they use 4 or 5 horses in a plough, and all at length; do 1 acre a day from 4 to 6 inches deep; the price 10*s.* They keep their horses from *October* to *May*, both inclusive, on hay and corn, allowing 2 bushels of oats *per* horse *per* week; but while at tares, in summer, only 1 bushel. They keep them in the stable till they have done the tares, and then turn them out to after-grass.

As to sheep, they breed some on the commons; the profit lamb and wool; some wether lambs they fat, and sell some old ewes lean or fat every year—they fold them only in the summer.

An ewe pays,

In lamb, - - - £. 0 7 0

— wool, - - - 0 1 6

no bad a dog ritrow; beok; - - -

0 8 6

Moist

4 THE FARMER'S TOUR

Most of their cows are suckled; reckon them not to pay more than 4*l.*; but they are kept pretty much on the commons.—A farm:

120 Acres in all	130 Sheep
10 Grass	10 Swine
110 Arable	28 Acres Wheat
£.70 Rent	20 Oats
9 Horses	20 Beans
6 Cows	4 Pease
5 Young cattle	28 Fallow

About *Cheam* are some variations; the soil is chiefly a chalky loam at 10*s.* an acre; but half the country common fields.

Their courses:

- | | |
|--------------------------------------|-----------|
| 1. Rye for sheep and
then turnips | 3. Clover |
| 2. Barley | 4. Wheat. |

And,

- | | |
|-----------|-------------------|
| 1. Fallow | 3. Clover fed |
| 2. Wheat | 4. Beans or oats. |

Wheat yields on an average 3 quarters; Barley 4; Oats 5; Beans 3; Pease 3 on the lighter soils; Turnips they reckon at 1*l.* 15*s.*; feed all on land; and Clover at one cutting 1 $\frac{1}{2}$ load; worth 30*s.* a load on the spot.

Rye,

THROUGH ENGLAND. 5

Rye, for spring feed, they begin to feed early, but in general from *March* to *May-day*; if it was inclosed they would begin at *Christmas*, but in the open fields are forced to be later. One acre inclosed, they reckon, will keep 5 couple 2 months well. Winter tares they sow for soiling horses; begin the middle of *April*, and last a month; then summer tares come in, and last till *Michaelmas*. They keep sowing tares every week from *Michaelmas* to the end of *June*. They succeed the winter sown ones with turnips. One acre will keep 5 horses a month.

They have some sainfoine on their chalks; sow it with barley or oats: They find that it will last on poor land 12 years, but not more than 7 on good soils. They generally mow it for hay; on good land get 2 loads; and half as much on bad: they reckon it worth 30s. a load at home.

They are attentive to the purchase of manures. They bring much dung from *London*, which costs 2s. a load, as much as 4 horses can draw; the carriage 10s. more; of this they spread 8 loads *per* acre.

Also trotters at 8s. a quarter: these they do not think so good as the same value in

6 THE FARMER'S TOUR

dung. They sow 3 quarters an acre on light land, with wheat seed. They also use chalk; lay 12 loads an acre; reckon it does best on strong land. It mellows and makes it *kindlier*; lasts 6 or 7 years.

Soot they strow on sainfoine and clover, 20 bushels an acre, at 6*d.*

Also peat ashes, 16 bushels, at 6*d.*; bring it 12 miles: This they reckon better than foot.

Flocks of sheep rise to 300; they do not fold them in winter; 300 will fold 2 acres in 3 weeks. In eating turnips they pen them in corners and head-lands littered with straw, and so cart the dung and earth away. Their general management is to buy *Wiltshire* lambs and wethers in the spring at 16*s.* to 20*s.* and at that time twelvemonth sell them fat from turnips and hay; they can have them kept on turnips at 3*d.* a week. An acre, they reckon, will last 100 sheep from 1 to 2 weeks, but they must have some clover hay with it. If they buy at 20*s.* they sell at 28*s.* or 30*s.* and get 3*s.* 6*d.* more by the wool; profit in all 12*s.* 6*d.* besides the fold.

Ewes of the same breed they buy at
Michaelmas

THROUGH ENGLAND. 7

Michaelmas at 18s. or 20s.; these they turn into the stubbles till *Christmas*, when they put them to turnips, on which they are kept till *May-day*; then the rye comes in for them; clovers follow that; and in *July* they sell the lambs fat at 20s.; after which they fat the ewes, and sell them in *March* at 26s. or 27s; the wool 2s. 6d. This appears to be a very profitable system.

Lamb,	-	£. 1	0	0
Ewe,	-	1	7	0
Wool,	-	0	2	6
		2	9	6
Prime cost,		0	19	0
Profit,	-	1	10	6

Most of the farmers suckle their cows, and get 5l. a head by it.

In their tillage they reckon 5 horses necessary for 100 acres arable; use 4 or 5 in a plough, and do an acre a day: cut about 5 inches deep; the price in strong land 10s.; in light 7s.

They allow their horses all the year 2 bushels of oats and beans mixed, worth 2s. 6d. a bushel, and 3 trufs of hay *per* horse *per* week,—Tares are instead of hay, not

8 THE FARMER'S TOUR

corn. Shoeing 15s. a horse. Farrier and decline of value, 4l.—Their teams are immensely expensive in corn.

Tythes are generally gathered; rates 2s. 6d. in the pound.

Mr. *William Neal* of this place, to whom I am indebted for this account, tried 5 acres of white hotspur pease in the drill way. The soil a hazel loam on chalk. The rows equally distant, 10 inches: and 3 acres adjoining were sown broad-cast at the same time; each 2½ bushels of seed. Both were hand-hoed once. The crop 2 quarters 5 bushels *per* acre on the broad-cast, and 3 quarters on the drill. The price 8s. a bushel; 24s. an acre superiority is sufficient to decide the benefit of drilling.

There are also some variations at *Cuddington*, a neighbouring parish. The soil is either clay—or a hazel loam on chalk; lets from 14s. to 20s. an acre the inclosed. The course of crops;

1. Turnips

3. Clover

2. Barley

4. Wheat.

This on the lighter soils.

1. Fallow

3. Beans.

2. Wheat

For

THROUGH ENGLAND. 9

For heavy land ; the cart before the horse.

Wheat yields 3 quarters an acre ; Barley 4 quarters ; Oats 5 ; Beans $2\frac{1}{4}$; Pease 2 ; Turnips 1 ℓ . 15 s . ; and Clover at two mowings 3 loads an acre ; worth 40 s . a load on the spot : 50 s . to 3 ℓ . 10 s . at *London*.

They do not sow sainfoine, because they reckon the loam too deep for it. It is 18 inches before you come to the chalk. By the way, this depth of loam on chalk is the finest soil in the world. It is all nonsense to suppose that sainfoine will not thrive on it.

They suckle all their cows : 5 ℓ . the product. They feed them in summer on the meadows and clover ; one acre of grass at 20 s . will summer feed a cow. In winter they are fed on straw when dry, at other times on hay, grains, malt-dust, &c. A cow will eat a bushel a day of grains, at 1 s . a quarter besides carriage, and a peck of malt-dust, 6 d . a bushel besides carriage. This food makes the cows give a great quantity of thin milk, but it does well for suckling.

Suckling ewes they reckon the most profitable management of sheep ; if they are

10 THE FARMER'S TOUR

not kept, wethers are best. They buy in *Wiltshire* wethers at *Michaelmas*, half fat, at 25s.; these they put immediately to turnips, and sell them in *March* and *April* at 32s. Six acres of good turnips will fat 50 sheep, but they will eat 2 loads of clover hay besides.

In their manuring they depend chiefly on *London*; they lay 10 loads an acre of common dung, which costs them 7s. carriage included.—Soot they spread on clover; and malt-dust on clover and green wheat in spring. Trotters 8 quarters an acre, at 6s. lasts 2 crops. They lay 20 loads of chalk an acre—not as an enricher, but to make the clay work more mellow,

Their tillage the same as the preceding.

In the hiring farms they reckon 2000l. necessary for one of 300l. a year.

Particulars of a farm here.

350 Acres in all	200 Sheep
50 Grass	60 Swine
300 Arable	6 Men
£300 Rent	4 Boys
15 Horses	1 Maid
20 Cows	9 Labourers
30 Young cattle	80 Acres wheat

THROUGH ENGLAND. 11

50 Barley 30 Turnips

50 Oats 40 Fallow

20 Beans 50 Clover.

5 Pease

Labour, provisions, &c. in these places
are as follow—

LABOUR.

In harvest and hay-time, 2 s. and board.

In winter, 1 s. 6 d. a day.

Reaping, 7 s. to 10 s.

Mowing corn, 1 s. 4 d. to 2 s.

——— grafs, 2 s. to 4 s.

Mow, make, and cock, 9 s. to 10 s. 6 d.

Hedging and ditching, 6 d. to 8 d. a rod.

Hoeing turnips, 5 s. to 7 s. the first; 4 s.

6 d. to 5 s. the second.

——— beans, 5 s. to 7 s.

Head-man's wages, 10 l. 10 s.

Next ditto, 8 l. to 9 l.

Lad's, 6 l.

Women in harvest, 1 s. 2 d. to 1 s. 6 d.

——— hay time, 1 s. 2 d.

——— winter, 9 d.

Maid's, 2 l. to 4 l.

12 THE FARMER'S TOUR

PROVISIONS.

Bread,		1 $\frac{1}{2}$ d. per pound.
Butter,		7 to 10 d.
Cheese,		3 $\frac{1}{2}$
Beef,		3 $\frac{1}{2}$
Mutton,		4
Veal,		5
Pork,		4 $\frac{1}{2}$
Bacon,		7 $\frac{1}{2}$
Milk,		1 to 1 $\frac{1}{2}$ d. per pint.
Potatoes,		7 peck.
Labourer's rent,		3 l. to 4 l.
— firing,		40 s.
— tools,		5 s.

IMPLEMENTS.

A waggon,	16 l.
A broad wheel cart,	20 l.
A plough,	1 l. 10 s.
An ox harrow,	6 l.
Horse ditto,	3 l.
Roller,	2 l. 10 s.
Laying a share,	8 d.
— coulter,	4 d.
Shoeing,	2 s.

BUILDING.

Bricks, per 1000,	16 s. to 24 s.
Oak timber,	1 s. 2 d. to 1 s. 8 d.

Ash,

THROUGH ENGLAND. 13

Ash, 1s. 2d.

Elm, 1s.

Soft wood, 6d. to 10d.

Carpenter, *per day*, 2s. 6d.

Mason, 3s.

Thatcher, 3s.

From this part of *Surry*, I turned towards *Kent* by *Carshalton*, in which neighbourhood farms are in general small, though one or two rise so high as from 200*l.* to 600*l.* a year: the soil, in general, a light hazel mould on chalk, from six inches to two feet deep: the average rent 10*s.*: the open fields 3*s.* to 7*s.* 6*d.* and the inclosures 20*s.* Their courses;

- | | |
|------------|-----------|
| 1. Turnips | 5. Wheat |
| 2. Wheat | 6. Barley |
| 3. Barley | 7. Oats. |
| 4. Clover | |

As vile a one as I have met with this many a day.

- | | |
|------------|--------------------|
| 1. Turnips | 4. Wheat |
| 2. Barley | 5. Barley or oats. |
| 3. Clover | |

Also,

- | | |
|------------|----------|
| 1. Turnips | 4. Pease |
| 2. Barley | 5. Wheat |
| 3. Clover | |

14 THE FARMER'S TOUR

This is a very peculiar course, and a very bad one: good clover always ensures good wheat, if sown directly on it; but introducing pease, which are an uncertain crop, between, the case is altered at once: you are as likely to have a bad as a good crop of wheat: the pease should follow the wheat. Their crops are,

Of wheat, three quarters.

Of barley, four quarters.

Of oats, from three to five quarters.

Of pease, two and a half; but they never hoe.

Of beans, three and a half; never hoe.

They hand-hoe their turnips once or twice, and feed them all on the land with sheep: reckon the value 40s. an acre. Their clover they mow twice for hay, of which they get three loads at the two cuttings; but, when they feed it, they reckon the wheat that follows is best. On the hills, they mix ray-grass with it for sheep: they have a notion here, that turning sheep in the spring, fresh into ray-grass, kills them often with the white scower: to what particularly this is owing I could not discover; but I never heard it mentioned

mentioned as common in those countries where ray-grass is used in vast quantities.

They sow both winter and summer tares for feeding sheep, which do as well on them as on any other food; but Mr. *Munday*, of this place, thinks it better to mow and carry them on to a lay for the sheep: they use some for foiling horses. One acre will keep four a month.

Sainfoine they sow on the hills, four bushels of seed an acre: it lasts from ten to twenty years: they mow it constantly for hay, of which they get a load and a half *per* acre, worth 40*s.* a load on the spot, and the after-grass worth 10*s.* Some buck-wheat is also sown; five pecks of seed; the crop two and a half or three quarters: they give it to horses, and reckon that four bushels are as good as six of oats. They fold their sheep all the year through: 2000 will fold an acre at a time; and once in a place will be as good as ten loads of dung; and they observe to change the manure from fold to yard dung. It is asserted, that *Ewel* fair is kept on an arable field, which is folded till the surface is quite a dunghill, and

16 THE FARMER'S TOUR

yet the crops are poor, which is owing to a want of change; but I will venture to remark, that a change of crops would turn out very differently. Lime has been burnt here, and tried on all the poor soils; but never did the least service.

They never chop their stubbles.

Chalk is drawn out of pits; 30 loads an acre, at 20s. but the farmer finds one horse and two small carts. It will last 40 years. It is a hard chalk, that makes the land mellow, and cleans it from weeds. Mr. Munday thinks, the soils that bear wild forril want chalk.

Good grass land lets at 20s. an acre; they mow it for hay, and get two loads an acre. An acre will keep a cow through the summer. Their flocks rise to 2000. The profit of *Wiltshire* ewes, worth 22s. each, will be;

Lamb,	-	-	-	£. 0	13	0
Wool,	-	-	-	0	2	0
Ditto of the lamb,	-	-	-	0	0	6
Total,	-	-	-	0	15	6

A flock,

THROUGH ENGLAND. 17

A flock, consisting of 1000 ewes, and 500 tegs, will yield annually, 600 lambs, at 15s.

200 ditto, at 12s.

200 ditto, at 10s.

In folding, Mr. *Munday* reckons, that 100 ewes will dung more land than 140 wethers.

In their tillage, they reckon five horses necessary for 100 acres arable: they use three or four in a plough, and do one acre a day: the price 7s. an acre.

The particulars of a farm here:

2000 Acres in all	200 Acres wheat
1600 Arable	200 Barley
400 Grass	100 Oats
2000 Sheep	10 Beans
34 Horses	60 Pease
60 Cows	450 Clover
25 Young cattle	140 Turnips
100 Swine	200 Fallow
1 Man	80 Sainfoine
20 Labourers	160 Ray-grass.

As I shall enter *Kent*, before I take any other minutes, it will be proper here to conclude this letter.

I am, &c.

LETTER XX.

ABOUT *St. Mary's-Cray*, land lets from 10*s.* to 20*s.* an acre; the average 14*s.* The course;

- | | |
|------------|-----------|
| 1. Turnips | 3. Clover |
| 2. Barley | 4. Wheat. |

The wheat crops three quarters *per* acre, on a medium; the barley five, and oats five or six; turnips are worth 40*s.* or 50*s.* and clover, at two mowings, yields three loads of hay. Pease they drill in equally-distant rows, two feet asunder, gather the pods, and then sow turnips, of which they get in this manner fine crops. When their pease are for seed, they sow them broadcast: they use chalk as a manure, and find it answers greatly.

Here I first observed turnwrest ploughs in general use.

Three miles from *Dartford*, in Mr. *Calcraft's** neighbourhood, both the soil and

This gentleman's villa here is in a beautiful situation: his lawn skirts the *Tames*, on a bold shore, and the view of the ships sailing, through the stems of the scattered trees, very picturesque.

THROUGH ENGLAND. 19

and culture are extraordinarily good: the land is a very fine loam on chalk, and a fresh instance of the excellency of that soil. It lets from 10s. to 30s. average 20s.

Their courses;

- | | |
|------------|---------------|
| 1. Turnips | 4. Wheat. |
| 2. Barley | And some add, |
| 3. Clover | 5. Pease. |

And,

- | | |
|------------|------------|
| 1. Turnips | 4. Clover |
| 2. Barley | 5. Pease |
| 3. Oats | 6. Barley. |

Which is not equal to the first: the greatest objection to it is the oats and barley coming together, and clover with the second. Their crops are very considerable.

Wheat so high as five quarters; the average four.

Barley up to ten; the average eight.

Oats six or seven quarters.

This is not equal to the others; but is owing to their being a second crop: a proof, by the way, of the bad husbandry of making them so.

Pease and Beans, from four to six quarters: both are always drilled and hand-hoed once or twice.

20 THE FARMER'S TOUR

Sainfoine lasts sixteen or seventeen years, and yields, on their poorest lands, two loads of hay an acre, and an after-grass worth 10s.: their clover they mow once for hay, and get one and a half or two loads an acre.

Chalk they use on their heavy lands with great success.

About *Northfleet*, which is a little further east, the soil continues equally good: lets at 20s.

Wheat yields, on an average, four quarters.

Barley six.

Oats seven or eight.

Pease four to seven.

Beans four to eight.

Both the latter are drilled, horse and hand-hoed, and wheat generally sown after them: a strong instance of the excellence of the husbandry, to gain such noble crops, and substitute them at the same time for a fallow. But little sainfoine here.

At *Chalk* I had the satisfaction of seeing the piece of broad-cast lucerne, (one acre and a half) which I mentioned four years ago in my *Six Weeks Tour*. It belongs to
Mr.

THROUGH ENGLAND. 21

Mr. *Butcher*, is seven years old, regularly mown for soiling horses, and keeps six from *May-day* till *Michaelmas*.

Four horses *per* acre, at 5*s.* *per*
horse *per* week, 18 weeks, £. 18 0 0

Mr. *Bannister*, of the same place, has just ploughed up six acres; that were worn out: the age 16 or 17 years. He generally mowed it thrice a year for hay, and got two loads an acre at each cutting: the value 3*l.* a load: this produce likewise is 18*l.* *per* acre. He has taken a crop of turnips on the land, and designs sowing it down again to lucerne.

The soil here is all a fine black loam, with some stones in it: lets at 17*s.* an acre.

Observing several turnwrest ploughs at work, I walked some bouts by them, and remarked, that the moveable mould-board is so narrow, that it lets the earth constantly fall over it; nor does it cut a level furrow: they had four horses and a driver for working a field, so light and fine, that a *Minorca* draught of a jack-ass, and a
C 3 boar-pig,

22 THE FARMER'S TOUR.

boar-pig, would have been highly sufficient for stirring it.

From *Shorn* to *Rockester* many beans, and all drilled in rows equally distant, 18 inches asunder, and many of them, for several miles, with turnips between; but not promising ones.

In the dock-yard at *Chatham* there is a small field of lucerne, belonging to commissioner *Hanway*, in equally-distant rows, two feet asunder: the whole, I with pleasure remarked, was as clean as a garden; and yet, on examining a heap ready mown for the horses, I could not observe it the least gritty.—An objection I have heard offered against thorough tilling the intervals of drilled lucerne, is the earth and dust hanging to it as it falls from the scythe; but I apprehend the surface hardens sufficiently, during the growth of the crop, to prevent that evil: for hoeing can only be done while the crop is quite young.

Within two miles of *Sittingbourn*, land lets at 15s. an acre: their crops;

Wheat, three quarters and a half.

Barley, five.

Pease,

THROUGH ENGLAND. 23

Pease, three and a half.

Beans, five to eight.

Both pease and beans are all drilled, hand-hoed twice, and horse-hoed as often.

All the horse-hoeing, I have mentioned in *Kent*, is done with the well-known implement, the shim.

Very little sainfoine here.

About *Feverisham*, the soil is a rich, black, deep loam: lets in general at 20s. an acre; but hop-grounds 3*l.* 10s.; at a distance it brings only 12s. Farms rise from 20*l.* to 200*l.* average 70*l.*

To *Maidstone* twenty miles, six good land, fourteen hilly, either chalky or stones: 5s. an acre; but much sainfoine on them.

From hence to *Sittingbourn*, rents are 20s. an acre; to *Broughton-hill*, on the left side of the road, 20s. on the right 12s.; but the woods to *Canterbury* would not let for more than 5s. an acre; the whole *Isle of Sheepy*, on an average, 11s. It is a strong, clay soil, full of pyrites; marshy, mostly grazing land, applied to breeding and fattening sheep they buy from *Romney-Marsh*.

The courses of crops around *Feverisham* are,

C 4

1. Turnips

24 THE FARMER'S TOUR

- | | |
|------------|--------------------|
| 1. Turnips | 4. Wheat |
| 2. Barley | 5. Barley or oats, |
| 3. Beans | |

Also,

- | | |
|-------------------|-----------|
| 1. Turnips | 5. Barley |
| 2. Barley | 6. Beans |
| 3. Clover, 1 year | 7. Wheat. |
| 4. Wheat | |

On the rich lands about *Feverisham*,

- | | |
|----------|-----------|
| 1. Beans | 2. Wheat. |
|----------|-----------|

Mr. *Hilton*, of the *Abbey* farm, has, for many years, had a constant succession in this course: the soil a fine, rich, deep loam: the beans drilled in equally-distant rows, 18 inches asunder: the crops all very great; but the land is richly manured,

They plough but once for wheat, after either clover or beans; sow two and a half or three bushels an acre, and reckon the average produce at four quarters *per* acre; they rise to five. Mr. *Smith*, of *Feverisham*, had, in 1739, six quarters and two bushels *per* acre, over sixty acres of land. For barley they plough thrice, sow three bushels in *April*; the mean crop five quarters, from four to six: they stir two or three

THROUGH ENGLAND. 23

three times for oats; sow 3 or $3\frac{1}{2}$ bushels; the average crop 6 quarters; 10 are often gained. For pease they plough but once; drill 4 bushels an acre, in rows equally distant, 18 inches asunder; hand-hoe them once or twice at 3s. each time; the crop 2 to 5 quarters; $3\frac{1}{2}$ the average. For beans they stir but once; drill $3\frac{1}{2}$ bushels an acre; the rows 18 inches asunder; hand-hoe them once or twice; and horse-hoe them with a shim two or three times—this to both pease and beans; and after all these operations, they earth up the rows with a round iron fixed on the shim. See the *Six Months Tour*, Vol. I. The average product is $5\frac{1}{2}$ quarters *per acre*; the crops rise from 5 to 7.

They plough thrice for turnips; hand-hoe them once; and feed all off with sheep; the value *per acre*, from 20s. to 3l. Their clover they mow twice for hay; and get $3\frac{1}{2}$ loads at the two cuttings.

At some distance from the town much sainfoine is sown; it does not last above 7 or 8 years, and they get from 1 to 2 loads of hay an acre, and an after-grass of 5s. —the hay 24s. a load out of the field.

Lucerne

26 THE FARMER'S TOUR

Lucerne has been tried here; three acres were sown broad-cast alone in the spring of 1766, on an old hop ground at 50s. an acre; it was mown in *August*, when the produce was but small; the after-grass was fed with cows; the product of the whole year not worth more than 15s. an acre.

1767.

This year it was mown twice for hay, and yielded at both, about 2 loads; calculated at 21s.; after which it was cut once for foiling cows; the value of which 10s. an acre.

1768.

Cut thrice this year also; the first cutting 3 loads of hay an acre; the second 2 loads; and the third for foiling cows, worth 15s. an acre.

1769, 70.

The same as in 1768. No cleaning in all this time, nor wanted any.

In 1768, 9, and 70, the crop

5 loads hay,	-	-	£.5	5	0
Cow feeding,	-	-	0	15	0
Total per acre,	-	-	6	0	0

But

THROUGH ENGLAND. 27

But this valuation of the hay appears to be preposterous; the price at which it sells at *Chalk*, mentioned above, of 3*l.* a load, seems much nearer the mark; at that rate it would be,

5 Loads,	-	-	£. 15	0	0
After-grafs,	-	-	0	15	0
			15	15	0

Carrots have been cultivated with success by Mr. *Hilton* above-mentioned. In 1768 he prepared an acre of rich deep land for madder, but sowed it with carrots; he kept them clean by hand-hoeing; the crop turned out 17 waggon loads an acre, as much as 4 horses would draw, tops excluded: I enquired particularly into the measure of the waggons; but they could not tell me the number of bushels; but 4 horses will with ease draw 80 bushels; suppose however only 60 bushels; the crop then is 1020 bushels per acre.

Say 1000 bushels at 1*s.* £. 50 0 0

Expences.

Rent, suppose	-	-	£. 4	0	0
Ploughing,	-	-	1	0	0
Carry over,	-		5	0	0

28 THE FARMER'S TOUR

Brought over,	-	£.5	0	0
Harrowing, seed and sowing,		0	10	0
Hoeing, suppose	-	2	0	0
Taking up,	-	1	10	0
		9	0	0

Produce.

1000 Bushels,	-	50	0	0
Expences,	-	9	0	0
Profit,	-	41	0	0

And I know from experience that they are worth this price in feeding any cattle: but suppose they pay but 6*d.* a bushel; what a prodigious acquisition is 25*l.* an acre from an ameliorating crop that prepares so well for any thing else? Mr. *Hilton* applied them to feeding all his horses instead of oats; and met with the utmost success in that use of them.

In respect to manuring about *Feverham*; some sheep are folded; and lime is pretty much used; they lay 160 bushels *per* acre, at 3*d.* a bushel; it lasts two or three years, and is attended with great advantage, both on wet soils, and also sands: They also find

a very great improvement from mixing chalk with dung and earth. They do not chop their stubbles; but they aim at the same effect by horse-raking them, and carting home to the farm-yard for dung. Their hay is all stacked at home.

In draining they have made some proficiency: covered drains are well known about *Luddenham*; they fill them up with bushes, and find the improvement uncommonly profitable, though executed at the expence of 4*l.* an acre.

The new white-thorn hedges they plash in a very neat and strong manner; but it is not so general as it ought to be.

Grass land lets at 20*s.* an acre; it is chiefly used for sheep; they stock at the rate of 3 or 4 to the acre; the sort, *Romney-marsh* ones without horns, about 28*lb.* a quarter. Cows give 5 gallons of milk a day, or 10 or 11*lb.* of butter a week; the total product *per* cow, 7*l.* Mr. *Crowe* of *Feverham* has made 10*l.* a cow; not by selling milk, but from butter and calves. They keep 2 hogs to a cow. A dairy-maid will manage 12 cows. Their winter food is hay, while milked; straw when dry.

Many

30 THE FARMER'S TOUR

Many sheep are fattened here; chiefly the *Romney* breed without horns. These give 6 to 8 *lb.* of wool *per* fleece; but the *Wiltshire* ones not more than 3 *lb.*; and the price of both sorts the same.

In their tillage they reckon 6 horses necessary to 100 acres of ploughed ground; they use 4 in a plough; and do from an acre to $1\frac{1}{2}$ *per* day; go 5 inches deep; the price 7*s.* The keeping a horse they estimate at 8*l.* a year; but the total expence, decline of value included, at 15*l.* a year.

They do not cut straw into chaff.

They break up their stubbles as soon as wheat sowing is over. Only turnwrest ploughs used.

In hiring farms they reckon three rents necessary to stock.

Land sells at 25 years purchase. Tythes are chiefly gathered. Poor rates from 3*s.* to 4*s.* in the pound. Twenty years ago they were not half so much.

LABOUR.

In harvest, 2*s.* 6*d.*

In hay-time and winter, 1*s.* 6*d.*

Reaping, 5*s.* 6*d.* to 10*s.*

Mowing

THROUGH ENGLAND. 31

Mowing corn, 2*s*.

——— grass, 2*s*. 6*d*. to 3*s*.

——— making and cocking, 6*s*.

Hoeing turnips, 6*s*. to 7*s*.

——— beans and pease, 2*s*. 6*d*. to 3*s*.

Plashing a hedge, 3*d*.

Thrashing wheat, 1*s*. 8*d*. to 2*s*.

——— barley, oats, pease, and beans, 1*s*.

Head-man's wages, 10*l*. to 12*l*.

Next ditto, 9*l*.

Lad's, 6*l*.

Maid's, 3*l*.

Women *per* day in harvest and hay-time, 1*s*.

In winter, 8*d*.

At hops, by the great, 8*d*. to 1*s*. 6*d*.

Price of labour not raised.

PROVISIONS.

All exactly regulated by the *London* markets,

House-rent, 50*s*. to 3*l*.

The following are the particulars of farms here.

180 Acres in all

£.200 Rent

8 Acres Hops

.4 Meadow

84 Wheat

84 Beans

5 Men

1 Boy

32 THE FARMER'S TOUR

2 Maids	4 Cows
4 Labourers	4 Young cattle
12 Horses	25 Swine.

Another :

160 Acres in all	10 Horses
£. 100 Rent	4 Cows
4 Acres Mead	3 Young cattle
50 Wheat	20 Swine
50 Barley	5 Men
50 Beans	1 Boy
2 Clover	2 Maids
4 Hops	4 Labourers.

Mr. *Jacob* of *Feverham* has formed several very fine plantations of chestnuts. He began in 1766 with planting 6 acres; the soil a light gravelly loam; poor; not worth more than 4s. an acre; it was an old broom cover: he first grubbed and then fallowed it a year, and planted at *Christmas*.

Grubbing the broom,	£. 9 0 0
Digging, planting, and plough-	
ing, - - -	28 16 0
	37 16 0

The chestnut plants 5s. per 100, and 650 to an acre.

It was set with rows of red willow for hop poles, 8 feet square, and between every willow in the rows, a *Spanish* chestnut. Nuts were first set, but they being destroyed by mice, the land was replanted with sets of 1 and 2 years old. The whole plantation was kept quite clean from weeds, with a four pronged hand-hoe, at a considerable expence. The appearance of the whole very favourable: The chestnuts are 4 feet high; the willows have been cut down, and are now growing for poles, for which they will be ready to cut in 10-years growth.

○ In 1769, fourteen acres more were planted with willows and chestnuts in the same manner.

○ In 1766, twelve acres of stiff stoney land were planted with young ash, 6 feet square, at 3 feet high: cut them down in four years; the product a few faggots. They are now growing for hop poles; they are in two years growth from 5 to 12 feet high.

○ For hop poles the chestnut is most preferred; they are better than ash; will yield 40s. per hundred.

Next are the ash and red willow, which are equal: the price of these 30s. an hundred.

34 THE FARMER'S TOUR

The alder is not worth more than 15s. the beech is also bad, though rather preferable to the alder. 3000 poles will grow on an acre. That number, at 40s. comes to 60*l.* an acre.

Planted woods for poles, of ash or red willow, will yield 30*l.* an acre, on an average, in ten years.

Mr. *Jacob* tried hops also for fourteen years; and, on an average of those years, found his accounts to run as follows.

<i>Expences.</i>	
Rent,	£. 3 10 0
Digging,	1 0 0
Poling,	0 10 0
Poles,	6 0 0
Tying,	0 10 0
Hoeing twice or thrice,	0 10 0
Hilling,	0 5 0
Picking,	3 0 0
Drying, at 6s. a C. wt.	3 0 0
Duty,	4 10 0
Bags, four,	1 0 0
Total,	23 15 0

Pro-

THROUGH ENGLAND. 35

<i>Produce.</i>		
10 C. wt. at 3 <i>l.</i>	=	£. 30 0 0
Expences,	-	23 15 0
Profit,	-	<u>6 5 0</u>

The products varied from nothing to 18 C. wt.: he once had 18 C. wt. at 3*l.* per C. wt. or 90*l.* an acre. Mr. Jacob's planting is a public spirited undertaking that does him real honour.

Mr. Crowe of *Feversham* has made several very successful experiments in madder. The following is in general his method of culture.

The soil he chuses is a rich, deep, black mould: a rich sand excellent; but the true hop-soil the right sort. His rent 4*l.* an acre.

He begins the tillage at *Michaelmas*, ploughing it till quite clean at the common depth. The beginning of *May* he trench-ploughs it 9 inches deep, harrows it fine, and plants the end of *May*, or the beginning of *June*, chusing dry weather. He throws the land into spaces of 5 $\frac{1}{2}$ feet over; half of which is a bed, and half an alley: on each bed he sets four rows of madder, the plants one foot asunder. In

36 THE FARMER'S TOUR

this manner 30,000 plant an acre; the price 10s. *per* thousand. No manure used.

If the weather is quite dry, he always dips the plants in mud that sticks to them; two boys will dip for ten or twelve men; the mud sticks to the fibres, and he has found it to answer greatly in a dry season. After planting, he hand-hoes the rows thrice, and keeps the intervals clean with the *shim*.

As soon as the stalks are withered, he digs the alleys two spits wide, and raising the earth, spreads it on the beds, burying the madder haulm.

In the spring following the beds are raked, and all the lumps of earth levelled; after which the rows are cleaned by hoeing and hand-picking. In autumn, one spit is dug at bottom of the alleys, with which the stalks when withered are buried as before; and in the spring following raked again. In the summer, kept clean by weeding and hoeing.

At *Michaelmas* the crop is dug up, to the depth of two spits; the first with a pronged spade, and the second with the common spade.

spade. The first set of diggers pick their own earth ; but children follow the second, set and pick after them. His crops have risen to 18 *C. wt. per acre*. Mr. *Hilton* also had 18 *C. wt.* last year, for which Mr. *Crow* paid him 70 guineas an acre, and was himself at the expence of manufacturing.

The drying costs 6*s.* a *C. wt.* It requires more time than hops ; but a larger quantity can be laid on the kiln at once.

In respect to drawing the plants, Mr. *Crowe* drew 50,000 from one acre the second spring, and 120,000 from the same acre the third spring, which he sold at 10*s.* per thousand ; and this acre is planted on the side of another, from which none have been drawn, that the difference of the crop may be seen. But, as he apprehends the damage by drawing to be considerable, he has planted several acres at *Michaelmas* from the crop taken up. In this method, he finds they take much surer, not failing through dryness of the season ; and that he might know how much he diminished his crop by this way, he dried

38 THE FARMER'S TOUR

a thousand plants, and the weight was only 2 lb. consequently an acre takes but 60 lb. which is only half a C. wt. or 2 l. 5 s. at 4 l. 10 s. per C. wt. whereas, if they are drawn in the spring from another crop, the damage he apprehends to be much more considerable.

He has tried dung on a part of an acre, and it has given the plants a very luxuriant appearance.

For the manufacturing the crop, he has invented a horse-mill for grinding, which has answered so well, that he has large quantities sent from *London* to grind: he last year ground three thousand pounds worth from thence.

Mr. *Crowe* does not think it impossible to raise 30 C. wt. on an acre; but is very clear that he shall get to 25 C. wt. His plantations have been,

In 1766—one acre.

In 1767—two acres.

In 1768—three.

In 1769—three.

In 1770—ten.

And intends in 1771—forty.

THROUGH ENGLAND. 39

The expences *per* acre he has found as under.

First year.

Three ploughings,	-	£. 1	1	0
Trench ditto,	-	0	14	0
Harrowing,	-	0	2	6
Mudding and planting,	-	1	5	0
Plants, suppose	-	2	5	0
Three hand-hoeings,	-	1	0	0
Horse-hoeing alleys,	-	0	3	0
Digging the alleys and raking the beds,	-	1	0	0
Rent and tythe,	-	4	5	0

Second year.

Three hand-hoeings,	-	1	0	0
Digging and raking,	-	1	0	0
Rent, &c.	-	4	5	0

Third year.

Hand-hoeing,	-	1	0	0
Digging up,	-	11	0	0
Rent, &c.	-	4	5	0
Drying 18 C. wt. at 6s.		5	8	0

Total, - - - 39 13 6

D 4

Produce,

40 THE FARMER'S TOUR

<i>Produce.</i>		
18 C. wt. at 4 <i>l.</i> 10 <i>s.</i>	-	£. 81 0 0
Expences,	-	39 13 6
Profit,	-	<u>41 6 6</u>
Or per acre per ann.	-	<u>13 15 6</u>

Another crop.

<i>Expences.</i>		
As above,	-	39 13 6
Drawing plants,	-	1 10 0
Total,	-	<u>41 3 6</u>

<i>Produce.</i>		
16 C. wt. at 4 <i>l.</i> 10 <i>s.</i>	-	72 0 0
170,000 plants, at 10 <i>s.</i>	-	85 0 0
Total,	-	<u>157 0 0</u>
Expences,	-	<u>41 3 6</u>
Profit,	-	<u>115 16 6</u>
Or per acre per ann.	-	<u>38 12 2</u>

Plants

THROUGH ENGLAND. 41

Plants deducted it will be,	
Product,	£. 72 0 0
Expences,	39 13 6
Profit,	32 6 6
Or <i>per acre per ann.</i> ,	10 15 6

All these accounts carry the profit of madder much higher than that of hops: the last of 72*l.* product is not a fair one, as the crop sustained the damage of drawing 170,000 plants from it; the amount of which damage, were it known, should be added to the product.

It is extremely evident from these trials, that whoever possesses such a rich, deep soil, may apply it to a much greater profit by madder than by hops, and infinitely to more benefit than is possible by common husbandry.

Carrots however exceed it. The above inserted trial yielded a profit of 41*l.* *per acre* in one year.

This in three years is,	123 0 0
Whereas the madder is only,	41 6 6
Superiority,	81 13 6

42 THE FARMER'S TOUR

And that carrots may be raised with encreasing success three years running on the same land, I have had particular experience.

Mr. Crowe having entered into this culture with spirit and success, it is to be hoped that he will continue in it:—the progress he makes, will certainly be of very great public service.

You must here allow me to conclude myself,

Your's, &c,

LETTER XXI.

PASSING through *Canterbury* I entered with much eagerness a country which I had long heard was famous for its husbandry, viz. east *Kent* and the isle of *Thanet*. The route I took was to go to *Beakshourne*—*Addisham*—*Wingham*—*St. Nicholas* in the island—*Margate*—*Mimster*—and then to *Sandwich*, &c. which I was informed would be the tour of the best cultivated part of all *Kent*.

From *Canterbury* to *Beakshourne* and *Houlets*, the seat of Sir *Thomas Hales*, Bart. the soil is in general good, with some hop grounds. In that neighbourhood, the land in the low grounds is a deep rich loam; but on the hills it is light on chalk: the former let at 20s. an acre; the latter from 2s. 6d. to 8s.; average 6s. Farms rise from 20l. a year to 200; in general from 70l. to 100l.

The course of crops most common is,

1. Beans drilled; and manured for with 50 or 60 loads an acre as far as the yard

24 THE FARMER'S TOUR

yard dung, and mixed with mould, will go.

2. Wheat

3. Barley.

If clover is introduced, it then continues thus;

4. Summer fallow 7. Clover

5. Wheat 8. Wheat.

6. Barley

They plough but once for wheat; sow $2\frac{1}{2}$ or 3 bushels an acre; the crop 3 to 5 quarters; average $3\frac{1}{2}$. Their tillage for barley is to baulk the land in autumn; which is an half ploughing, about 4 inches deep. In spring they stir it a little below the former depth, by which means the land breaks up whole furrow; after this they plough again, if they have time, and then plough and sow.—That autumnal half earth, of 4 inches, is vile husbandry. In all tillage the first ploughing ought to be the deepest.

The quantity of barley seed three bushels; and the crop about $3\frac{1}{2}$ quarters.

For oats they plough but once; never more than twice when sown instead of barley; sow 4 bushels an acre, and gain 4 quarters.

quarters. They also plough but once for pease; drill them all; 3 bushels an acre, in rows equally distant, 20 inches; they hand-hoe them once, and horse-hoe with the shim twice. The crop $3\frac{1}{2}$ quarters *per* acre. For beans they plough but once; and either drop the seed by hand, or drill it in rows equally distant, 20 inches; they hand-hoe once, and shim twice. The crop from 3 to 7 quarters; average 5. All the pease and beans have been regularly drilled these fifty years.

In some vale farms, where the soil varies and no flocks are kept, another method is pursued. In these, as in the strong land farms, though some attention is paid to preparing a certain quantity of land for wheat tilth, this is arranged as follows. On the stronger land beans; the remainder either pease, clover of one year's growth, or fallow; on this soil of 10s. or 12s. rent, the beans yield 3 or 4 quarters; the wheat from 2 to 3 quarters; and the barley and oats from 3 to 4 quarters.

They sow some coleseed for food; they eat it from *Christmas* till the beginning of *May*.

Turnips

46 THE FARMER'S TOUR

Turnips they cultivate only on the lighter lands; they stir four or five times for them; hand-hoe once; sometimes twice, and eat them all on the land with sheep. The average value 3*l.* an acre.

Very little clover is mown for hay; they either feed it or soil their horses with it. Summer tares they use for the same purpose.

Sainfoine they cultivate in large quantities on the chalky downs; sow 4 bushels an acre: it lasts from 5 to 16 years; in general 10; mow it once every year for hay, and get from 1 to 2 $\frac{1}{2}$ tons *per* acre; the value directly out of the field, 20*s.* to 30*s.* a load. Many of their crops are damaged greatly by saving the first growth for seed. They manure it with foot, 30 bushels an acre, at 6*d.*: this they find much better than ashes.

In regard to manuring; they fold their sheep all the year round; that is wethers; which flock they reckon so much better than ewes, that they never fold the latter.

Chalk they lay on their land in small quantities; it does best on the heavy wet soils.

Lime

Lime is much used about *Witstubble*, &c. on wet strong soils 160 bushels an acre, and it is found a great improvement: but it does little or no good on the loams at *Beaksbourn*.

They rake their wheat stubbles, cart them home, and form stacks around the farm-yard, which the cattle make all into dung.—They sell most of their hay.

Plashing quick hedges is very well understood: some are excellently done.

Good meadow land lets at 40s. an acre; they are always mown; the crop 2 loads of hay an acre.

Flocks of sheep on the down farms, from 100 to 300; all wethers; the profit is the wool and the fold.—If a fold is hired, the price is 40s. an acre. In 9 or 10 score the wool pays the shepherd from buying in lambs to the felling out, after working them in the fold 2 years; then the advance is 10s. a head. In a flock of 9 score they buy in 60 lambs, at 10s. and sell the fold sheep out at 20s.

In their tillage they reckon 5 horses necessary for 100 acres of arable land: use 4 in a plough, and do generally 1 acre a day; some-

48 THE FARMER'S TOUR

sometimes $1\frac{1}{4}$ or $1\frac{1}{2}$. They stir from 4 to 6 inches deep. The price *per acre* 7s. None but turnwrest ploughs used here.

In hiring farms they reckon 6 or 700*l*. necessary for 200*l*. a year.

Land sells from 30 to 32 years purchase. Tythes are chiefly gathered.

Poor rates from 2s. 6d. to 4s. in the pound. They have no manufacture for the women and children; picking hops the only employment, except drinking tea and brandy very plentifully.

Sir Thomas Hales has cultivated hops on a large scale for several years; he favoured me with the following account of the average of the expences and produce *per acre* of 20 acres.

Expences.

Stripping the poles and stacking,	£.0	5	0
Dunging the hills once in four years of home made dung, 20 loads an acre; this is <i>per ann.</i>	0	10	0
Digging, - - -	0	16	0
Cutting, - - -	0	5	0
Poling, - - -	0	12	0
Carry over, -	2	08	0

THROUGH ENGLAND. 49

Brought over,	£.2	8	0
Poles, 350 <i>per</i> acre on an average,			
at 28s.	4	18	0
Digging around the hills,	0	2	6
Tying,	0	11	0
Hoeing,	0	0	5
Summer digging a fourth of the			
land,	0	8	2
Second hoeing,	0	0	5
Giving fresh earth,	0	0	1
Third hoeing,	0	0	5
Hilling,	0	0	5
Picking, 8 <i>d.</i> $\frac{1}{2}$ to 1s. a basket,			
which is on an average, 6s. <i>per</i>			
C. wt.	2	11	0
Drying, at 3s.	1	5	6
Bagging,	0	3	0
Bags,	0	18	6
Duty, at 8s.	3	18	0
Carriage of poles,	1	10	0
Sharping,	0	2	6
Shaving,	0	8	6
Rent,	£.3	0	0
Tythe,	0	10	0
Town charges,	0	9	0
	3	19	0
	23	9	6

50 THE FARMER'S TOUR

	Produce.	l.	s.	d.
In 1762. C. wt. 13 $\frac{1}{2}$, at per C. wt. 3		5	0	0
1763. 10		5	0	0
1764. 5		8	15	0
1765. 7		3	0	0
1766. 12 $\frac{1}{2}$		3	0	0
1767. 5 $\frac{1}{2}$		8	8	0
1768. 10 $\frac{1}{2}$		2	14	0
1769. 1		9	5	0
1770. 12		3	10	0
Average	8 $\frac{1}{2}$	5	4	1
8 $\frac{1}{2}$, at 5 l. 4 s. 1 d.		44	4	8
Expences,		23	9	6
Profit,		20	15	2
And on the 20 acres,		415	3	4

It is evident from this account, which Sir Thomas has kept with great accuracy, that the hop culture is here particularly profitable: the soil is, probably, very favourable, though not near so black as that of the hop grounds at *Feversham*: it is a fine mellow, deep, sandy loam, of a reddish colour. For 20 acres of land to be an estate of 400 l. a year, is making a small

THROUGH ENGLAND. 51

breadth of land yield at a great rate.—

These 9 years I apprehend to yield a fair average, for one is uncommonly bad—so low in produce that the high price is no compensation; not one year rises higher than $13\frac{1}{2}$ C. wt. though a ton is sometimes gained.

Sir Thomas's planted woods are cut once in from 12 to 16 years, and yield in hop poles from 20 l. to 60 l. an acre: 6 d. per ash pole has been given at *Waldershare*, 12 miles from *Canterbury*. In planting them, they are set in rows at 4 or 5 feet square; and they generally yield 3 or 4 poles per stub.

Sir Thomas has cultivated a cabbage which he calls *the Lombardy cabbage*, in his garden: 18 of them were weighed against 18 bushels of wheat, of more than 60 lb.; they were sown the beginning of *August*, and transplanted in *October*, 4 feet square, and there remained: it is a flat headed cabbage.

The *Jerusalem* turnip he has cut twenty times in one spring: no frost hurts them: the more you cut them the more they sprout.

Some cedars of *Lebanon* sown in 1741, and in 1770 they measured 7 feet circum-

52 THE FARMER'S TOUR

ference, 40 high, and the branches extend a circle of 40 feet diameter.

Several experiments of importance have been tried by the Rev. Mr. *Taylor* of *Bifrons*, of which he was so obliging as to give me the following account.

His general course of crops is ;

1. Fallow ; dunged with 20 loads *per* acre.
2. Wheat drilled
3. Beans drilled, with cabbages in the intervals ; manured after the wheat with 20 loads an acre.
4. Barley
5. Clover, one year
6. Wheat
7. Beans and cabbages as before, and no more fallow.

All the wheat is drilled in equally distant rows, 10 inches asunder : it is horse-hoed with a narrow shim once, and hand-weeded once ; the produce 4 quarters *per* acre. The beans are in double rows, at 16 inches, on 4 feet ridges ; consequently the intervals are 32 inches wide. They are cleaned by horse-hoeing, &c. The crop 4 quarters.

Experiment, No. 1.

Drilled a field in the above manner with beans. The end of *February* turned a furrow from the rows, throwing up a ridge in the middle of each interval. The beginning of *March* harrowed the whole field across; and again the end of the month. In *April* horse-hoed them with a plough with a broad share and no wrest. *May* 7th, skimmed the spaces between the rows. The 14th, harrowed the intervals with a nidget. See Plate X. Fig. 2. Vol. II. *June* 8th, used the broad share in the intervals. The 12th, harrowed them again with the nidget. The 15th, hand-hoed the rows. The 19th, planted cabbages, one row in the middle of each interval, 2 feet from plant to plant. The beginning of *August*, hand-hoed and hand-weeded them. The 27th, cut and coat the beans; that is, shock four sheaves together, the points of them fastened with a weed. As soon as they were got off the ridges whereon the beans grew, were ploughed, and became the intervals of the cabbages. The crop 4 quarters an acre; and was offered 3*l.* an acre for the cabbages. The sort of cabbage, Mr. *Taylor* calls

54 THE FARMER'S TOUR

the *Aberdeen*. They promise to come to 10 lb. or 12 lb. each.

Observations.

This thought of planting cabbages in the intervals of beans, is a very good one, and especially as it is so clearly proved to be advantageous to drill the beans in double rows, on 4 feet ridges. 4 Quarters *per* acre in that method, shew this to be the case very clearly. The cabbages come to a considerable value;—supposing them never to exceed 3/. they form with the beans, a product of 9/. an acre. Barley follows to much advantage, and consequently the wheat on a clover lay, which is better than sowing it on a bean stubble.

Experiment, No. 2.

Gave a field a complete fallow; ploughing it four times. The 8th of *November* drilled it with wheat, in equally distant rows, 10 inches asunder; $2\frac{1}{2}$ bushels of seed an acre. The 27th and 28th of *March*, skimmed it. The 9th of *April* harrowed it across and rolled it. The 17th harrowed it again: this was on account

count of heavy rains beating down the land. The 23d of *May*, hand-hoed it. The crop 4 quarters *per acre*.

Experiment, No. 3.

The 2d of *April*, drilled a field with oats, in equally distant rows, 11 inches asunder, 3 bushels of seed *per acre*. Shimmied it the 21st of *May*; the 23d, sowed clover over it; the 29th harrowed it, and rolled it across. The 15th of *July*, hand-weeded; the crop 4 $\frac{1}{2}$ quarters *per acre*; and the clover the cleanest in the country.

Observations.

It is of particular consequence to know, that the drill husbandry of spring corn does not exclude the culture of clover; on the contrary, it improves it; for in the method here pursued by Mr. *Taylor*, the barley is up before the clover is sown; consequently the evil of the grass growing too fast for the corn, is totally prevented; and the ground having some horse-hoeing, is cleaner than if the seed was harrowed in with the barley.

56 THE FARMER'S TOUR

Experiment, No. 4.

Ploughed an acre of light rich sandy land twice, in *May* 1770; rolled and harrowed it, and manured it with 20 loads of dung *per* acre. The middle of *May*, struck the furrows 2 and 3 feet asunder, and dropt kidney beans in them. They were hand-hoed thrice, and weeded once. Crop 20 bushels *per* acre.

Expences.

Two ploughings,	-	£. 0	11	0
Rolling and harrowing,	-	0	6	0
20 Loads dung, at 2 s. 6 d.		2	10	0
Striking furrows,	-	0	2	0
Dropping beans,	-	0	2	0
Seed,	-	0	15	0
Harrowing,	-	0	0	6
Hoeing and weeding,	-	1	0	0
Gathering, &c. suppose	-	0	15	0
Rent, &c.	-	1	5	0
			7	6 6

Produce.

20 Bushels, at 10 s.	-	10	0	0
Expences,	-	7	6	6
Profit,	-	2	13	6

Experiment, No. 5.

Planted the *Jerusalem* turnip, and the green and brown cole; all for sheep feed in the spring. The first sprouts very often in the spring; and sheep are extremely fond of it. Both the green and brown cole are excellent for sheep; but the former shoots the strongest.

Experiment, No. 6.

In *March* 1769, ploughed one acre of land twice, a foot deep; and the end of that month sowed it with carrots. They were twice hand-hoed. The beginning of *October* they were dug up with prongs; the crop 8 tons. Mr. *Taylor* used them for feeding his horses, and attended very accurately to the expenditure; he found they saved him just 8*l.* in hay and corn; which determines the value to be 20*s.* a ton; which is about 8*d.* per bushel.

Experiment, No. 7.

Two acres of a rich sandy soil, was in *November* 1769 ploughed on to the ridge, double trenched. *January* 15, 1770, harrowed it. The 18th, ridged back again.

March

58 THE FARMER'S TOUR

March 12, harrowed it; after this ploughed and harrowed it again. *April 7th*, ploughed and harrowed it again. The 10th, furrowed it with the drill shares, and sown with 5 lb. of carrot seed, which was covered by the harrows. *June 6th*, weeded. The 16th, hand-hoed. *July 30th*, hand-hoed again.

Taken up in *November*; the produce 16 tons *per acre*.

Experiment, No. 8.

Planted 2 acres with potatoes, in rows equally distant, 2 feet; kept clean by horse and hand-hoeing. Produce 400 bushels *per acre*; sold at 9d.; or 15l.

Plate XXI. Fig. 1. represents Mr. Taylor's broad shared horse-hoe, to which wrights are added at pleasure.

From 1 to 2	6 feet.
2 to 3	4
3 to 4	1
7 to 8	2 6 inches.
5 to 6	4
9 to 10	4 6
10 to 11	1 6
11 to 12	1 2

THROUGH ENGLAND: 59

From 12 to 13 1 7 inches.

14 to 15 1 2

It should be particularly observed, that the handles rest on the center of the plough at bottom, not in the common method on the tail of the beam.

Plate XXI. Fig. 2. is Mr. Taylor's nidget horse-hoe, for equally distant rows.

From 1 to 2 5 feet.

3 to 4 4

4 to 5 1 8 inches.

9 to 3 2 4

7 to 8 3 6

10 to 12 1 8

13 to 14 1 8

11 to 12 8 and one foot broad.

15 to 16 1 2

Diameter of the wheels, 9 inches.

Plate XXI. Fig. 3. is a drill plough, invented by this gentleman *.

From

* Mr. Taylor has a very good collection of pictures, some of them by the greatest masters. *Salvator Rosa*. Two landscapes. The tree to the right, and that opposite the mountains, good: and the group of figures pictu-

60 THE FARMER'S TOUR

From *Bifrons* I went to *Addisbam*, in order to view the husbandry of Mr. *Reynolds*, the well known introducer of the cabbage turnip. He has made many trials in

pictureſque: Neither of them quite ſo wild as common with this painter.

Pouſſin. Large landscape. Very fine: the figures well done.

Ditto. A ſmaller ditto. Excellent! The harmony of this piece ſtriking. The keeping uncommonly fine. And the figures have an elegance and a chaſtity not often ſeen.

Ditto. Its companion. Fine.

Vandervoeld. Shipping. Very fine.

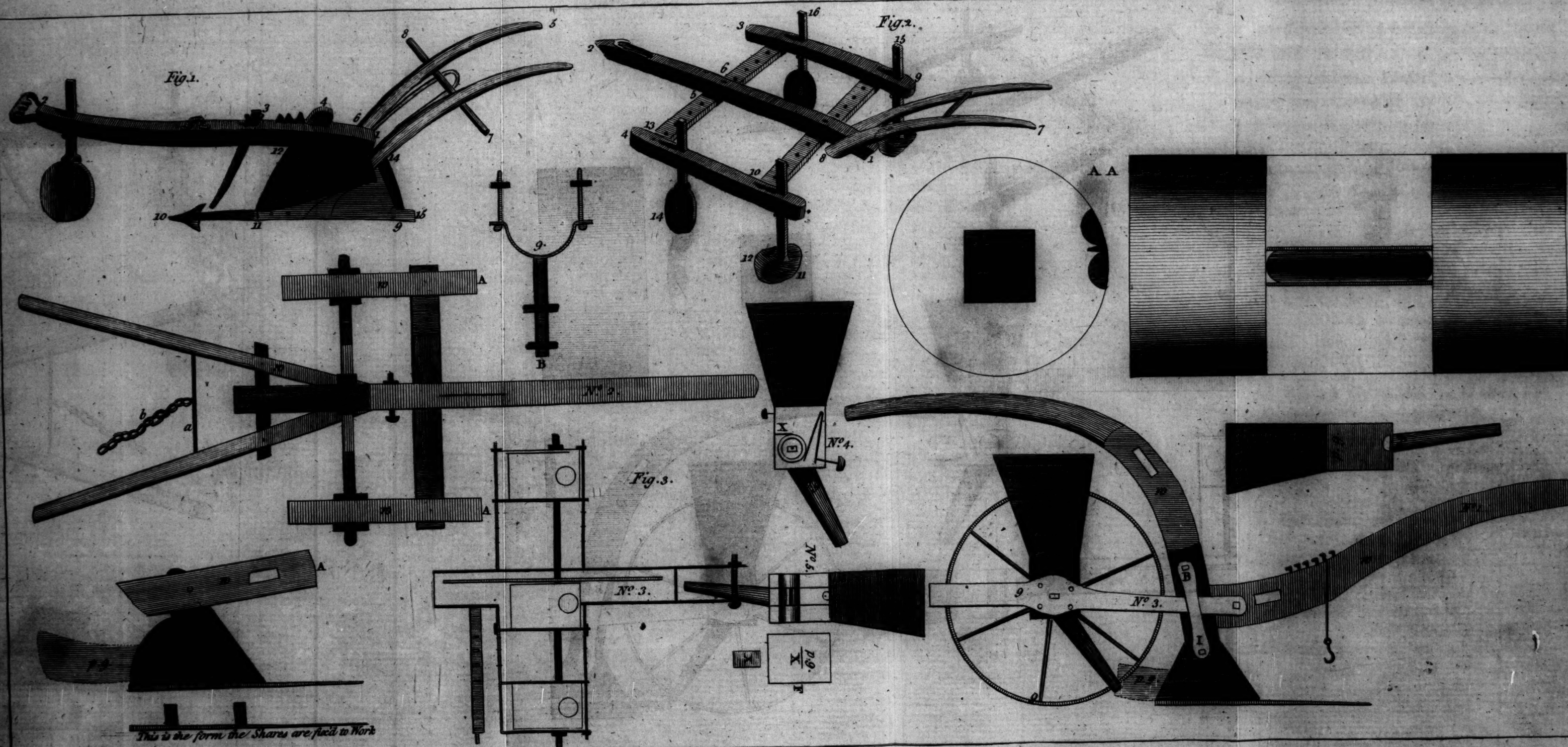
Old Palma. The *Maries* in the ſepulchre with the dead body. Exceedingly fine.—The group—the expreſſion of the countenances—and the variety of the colours without any glare; highly pleaſing. There is an harmony in it that ſtrikes.

Unknown. *Medea* with the inſignia of enchantment; a large dog, and ſome cattle. An odd wild piece, but very fine. There is an expreſſion in it, that ſhews the hand of a maſter. Her figure is in ſtrong relief, though a moſt unmeaning attitude. The dog is very well done.

Ditto. Holy family. Fine.

Rubens. A large piece of ſeveral figures. Ditto.

Mr. Bamfield. A landscape. Very pleaſing.



in husbandry, besides practising it in general in a very complete manner.

CABBAGES.

Mr. *Reynolds* began this article of culture from seeing Lord *Halifax's*, in 1731, at *Hampton-court*, who fed oxen on them with great success. This is an anecdote unknown before; for it shews that this vegetable was many years ago known to possess a quality, which many deny it to have at present.

Experiment, No. 1.

Planted four acres, in 1732, of *the great white cabbage*: they were fed off with sheep. No minutes taken of the particular amount; but the shepherds declared every acre of them to be worth two of turnips.

Experiment, No. 2.

In 1733 fourteen acres were planted in rows $2\frac{1}{2}$ feet square; the winter was very severe with a deep snow; 300 sheep were chiefly wintered on them, besides many cart loads taken for the cows, &c. They weighed 6 lb. each.

In 1734, a plantation; but all destroyed by the caterpillar.

62 THE FARMER'S TOUR

Experiment, No. 3.

In 1735, twenty-six acres of the same sort were planted in the manner above mentioned, and kept quite clean by horse and hand-hoeing. The caterpillars eat many, and the frost destroyed most of the remainder.

Since these trials Mr. *Reynolds* planted but an acre or two now and then, for comparing them with turnips. Sometimes one was superior, sometimes the other; but on the whole, the cabbages best.

Experiment, No. 4.

In 1767 was the first discovery of the new cabbage turnip.

Sixteen perches of a hazel mould were ploughed four times for a seed nursery. The seed was sown the middle of *April*, and planted into five acres of various soils, the end of *June* and the beginning of *July*, in rows two feet asunder. They were kept clean by horse and hand-hoeing.

The 15th of *February*, one perch weighed 254 lb. or per acre 18 tons 2 C. wt.

Another, the 26th of *March*, 393 lb. or per acre 28 tons 1 C. wt.

Another,

THROUGH ENGLAND. 63

Another, the 27th of *April*, 476 lb. of *per acre* 34 tons. This product was from 68 plants, which is 7 lb. each.

They lasted good, and were fed with sheep to the 13th of *May*.*

Experiment, No. 5.

In 1768, seven acres of the cabbage turnip were planted, and consumed by various sorts of cattle, particularly sheep. The crop 37 tons an acre, and the success in using them very great.

Experiment, No. 6.

In 1769, seven acres more were planted: the success equally good: the crop 38 tons an acre.

Experiment, No. 7.

In 1769 sowed one acre, the 10th of *May*, in drills, the rows equally distant, 18 inches asunder; cut them out in the rows with a nine-inch hoe, and gave them two horse-hoeings besides. The product spent in *March*, 23 tons 6 C. wt. *per acre*. The soil a thin loam on chalk.

* Further particulars of this trial may be seen in Mr. *Dossie's Memoirs of Agriculture*, Vol. I.

64 THE FARMER'S TOUR

Experiment, No. 8.

In order to see the difference between sowing and planting, Mr. *Reynolds* caused half an acre on each side the fown to be planted; the rows 2 feet by 20 inches in both. They were sown the 26th of *April*, and planted in *June*. The difference was above 8 tons *per* acre superiority on the side of the planted, being both spent the end of *March* following.

Experiment, No. 9.

In 1770, the crop is three acres; but not equal to the preceding ones. It was however tried in slips with *Jerusalem* turnip, boorcole and common turnips, and found superior to all of them. The product this year only 36 tons an acre.

On these roots Mr. *Reynolds* observes in general, that his method of expending them is to eat off the leaves and branches with milch cows, and then to dig up the roots for sheep, who are exceedingly fond of them, and require no fodder whatsoever. From all the experience he has had of these crops, he judges them to pay him

2

at

THROUGH ENGLAND. 65

at the rate of 4*s.* 6*d.* a ton. His products have been, 34 tons.

37

38

36

23

168

Average, 33 tons, at 4*s.* 6*d.* or 7*l.* 8*s.* 6*d.* per acre. Hogs are extremely fond of them: One *C. wt.* he reckons better than two *C. wt.* of common turnips; and, respecting their ameliorating quality, he had, in 1769, six quarters per acre of both barley and oats after them.

TURNIPS.

Mr. *Reynolds* entered into business in the year 1726: turnips were then commonly cultivated in *Norfolk*, *Suffolk*, and *Essex*, where he had viewed them with attention: he introduced them into *East Kent* immediately, where none had been known; and he cultivated them with great success ten years, before his neighbours had ten acres.

In this culture, after preparing the land

66 THE FARMER'S TOUR

well on the level, equi-distant furrows are struck with a light double drill plough; in which manner it does an acre in an hour. These furrows are drawn from 18 to 24 inches asunder, according to the nature of the soil. On thin, light and dry lands, they are made closer and deeper, than on those that are stronger and better. In pretty good soils, the rows are about two feet, and the furrows about five inches deep. The seeds are sown in the broadcast way, immediately after the plough, one quart to an acre, including a little long-topped raddish seed, 1 lb. to 11 lb. of turnip seed; all sown by hand. The harrows follow the sower directly, and the roller them, and when done, it is harrowed twice more in a place across; but no more rolling. They are cleaned and thinned with a hand-hoe, and horse-hoed with the shim, setting them out twelve inches from plant to plant. The crops are found to be much superior to the common ones; for the turnips grow as large as a peck.

THROUGH ENGLAND. 67

Experiment, No. 10.

Since I had the pleasure of seeing Mr. *Reynolds*, I desired him to send me the weight of a crop of turnips I viewed on his farm in a rich soil. The 23d of *November*, a square perch of the red or purple top turnip weighed 532 *lb.* and a perch of the large cream-coloured top 540 *lb.* They are both in drills, 20 inches asunder, and a foot in the rows.

	<i>T.</i>	<i>C.</i>	<i>Q.</i>	<i>lb.</i>
The red or purple top,	38	0	0	0
The cream, -	38	11	1	22

Neither of them nearly arrived at the full growth. These are very great products.

Experiment, No. 11.

Mr. *Reynolds*, on the average of many years culture of hops, has found the expences, &c. to be as under.

Expences.

Rent, - - -	£. 1	0	0
Tythe, - - -	0	10	0
Town charges, - -	0	0	4
All other articles, including a manuring every third or fourth year of 35 loads, (36 bushels) - - -	18	6	0
Total, - - -	20	0	0

68 THE FARMER'S TOUR

Produce.

8 C. wt. at 4l. the average price,	32	0	0
Expences,	-	20	0
Profit,	-	12	0

Experiment, No. 12.

Ploughed a pea stubble that was quite clean; the soil a poor thin land, and drilled it with wheat, in rows equally distant, one foot asunder; the quantity of seed six pecks *per* acre; hand-hoed it once, shinned it twice, and hand-weeded once: produce 20 bushels *per* acre. At the same time ploughed and sowed a part adjoining, broad-cast, and sowed two bushels *per* acre. The crop 14 bushels.

Account of the drilled.

Expences per acre.

Ploughing,	-	-	£. 0	7	0
Harrowing,	-	-	0	1	0
Seed,	-	-	0	9	0
Drilling,	-	-	0	1	0
Hand-hoeing,	-	-	0	4	6
Carry over,			1	2	6

THROUGH ENGLAND. 69

Brought over,	-	£. 1	2	6
Horse ditto,	-	0	1	0
Weeding,	-	0	0	6
Reaping and harvesting,	-	0	10	0
Thrashing,	-	0	5	6
Carrying out,	-	0	1	3
Rent, tythe, &c.	-	0	10	0
Total,	-	2	10	9

Produce.

20 Bushels, at 6s.	-	6	0	0
Expences,	-	2	10	9
Profit,	-	3	9	3

Account of the broad-cast.

Expences.

Ploughing,	-	0	7	0
Harrowing,	-	0	1	0
Seed,	-	0	12	0
Sowing,	-	0	0	3
Weeding,	-	0	1	6
Reaping and harvesting,	-	0	10	0
Thrashing,	-	0	3	0
Carrying,	-	0	1	0
Rent, &c.	-	0	10	0
Total,	-	2	6	6

F 3

70 THE FARMER'S TOUR

Produce.

14 Bushels, at 6s.	-	£. 4	4	0
Expences,	-	2	6	6
Profit,	-	1	17	6
Profit by the drilled,	-	3	9	3
Ditto by the broad-cast,	-	1	17	6
Superiority,	-	1	11	9

Straw equal.

This trial is the average of Mr. Reynolds's experiments on this comparison; his drilled crops have arisen to five quarters *per* acre. This husbandry he has practised with regular success since the year 1730.

Experiment, No. 13.

In 1767, trench-ploughed four acres of a rich soil, twelve inches deep, after beans; harrowed and rolled it very fine; laid it into beds three feet wide, and planted them with madder, five rows on each bed, nine inches from plant to plant, leaving intervals two feet six inches wide between the beds of three feet. Those horse-hoeings were given

THROUGH ENGLAND. 71

given each twice in a place, and also three hand-hoeings.

The second year, two thirds of the field were planted again, the plants having failed; the rows were again horse-hoed thrice, and hand-hoed as often.

The third year, the appearance of the whole was so poor, that Mr. *Reynolds* took up all the plants, and they were just enough for one rood of land.

Expences.

Trench-ploughing,	-	£. 2	8	0
Harrowing and rolling,	-	2	8	0
Laying out the beds and planting,	6	17	6	
42,000 sets <i>per</i> acre, at 10s.		84	0	0
Three horse-hoeings,	-	1	4	0
Three hand ditto, at 5s.	-	3	0	0
112,000 sets, at 10s.	-	56	0	0
Planting,	-	4	0	0
Three horse-hoeings,	-	1	4	0
Three hand-hoeings,	-	3	0	0
Three years rent, &c.	-	16	0	0
Total,	-	180	1	6

72 THE FARMER'S TOUR

Brought over, £. 180 1 6

Produce.

By 10,500 plants, at 10s. 5 5 0

Loss on four acres, 174 16 6

Or *per acre*, 43 14 1

Per acre per ann. 14 11 4

Experiment, No. 14.

Sowed six acres with lucerne in the year 1763, part in the broad-cast way, and part drilled at 18 inches. Mr. Reynolds has not kept any particular account of all the circumstances relating to this experiment; but he prefers, on the whole, the broad-cast method, from his finding it impossible (as he considers it) to keep the drills free from weeds. The broad-cast has kept him four horses *per acre* from the beginning of *May* to the middle of *October*, or 23 weeks, which, at 2s. 6d. *per horse per week*, is 11l. 10s. *per acre*.

Chalking has long been practised in this part of *Kent*; and an observation I made in a field of this very ingenious farmer, on

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the

the subsidence of that body, when spread on the land as manure, deserves to be mentioned. Near his house is a large pit, from whence he has dug loam to lay in his yard. The upper stratum is a dark-coloured mould, about four inches thick, and then a good brick-earth loam many feet deep. About forty years ago, it was chalked, and the manure is now seen along the side of the pit, which is regularly cut, at the depth of from 7 to 12 inches; but what is extraordinary, the chalk is in pieces, many of them as large as a walnut, and some twice as big. Perhaps this shews that the common supposition, that the subsidence is owing to a perpetual washing off of small particles from the larger ones, either to be false, or confined to peculiar soils.

I observed one piece of husbandry in Mr. *Reynolds's* farm yard, which he told me was common among the best farmers in *East Kent*: it was a stratum of loam brought in and spread against the stable, &c. doors, to lay the dung on: it is certainly a most excellent practice. He assured

74 THE FARMER'S TOUR

assured me, that constant experience had proved the benefit of it; the manure lasts much longer than if laid on alone, though the quantities of mere dung are in both cases equal.

Since I minuted the above, I have been favoured with a letter from Mr. *Reynolds*, the substance of which will best appear in his own words. It explains several points of consequence.

“ *Adisham, Oct. 28, 1770.* ”

According to promise, I have taken from my journal-book of experiments, made from the year 1730 to 1740, several minutes, together with some others of later date: such as I deem the very best methods to be practised now in husbandry, and such as I have long adopted, are as follow.

Fallows : Wheat in drills.

Equidistant rows, one foot each; sow from 14 to 16 gallons; depth between two and three inches, according to the texture of soil: early sowing is best; last week in *September*, and first of *October*, is the best season for produce. Old wheat, well

well preserved, is free from smut* in the next generation; but this I have spoken to at large elsewhere.

Clover and trefoil-lays and bean-stubbles.

Sow in the *broad-cast way* two bushels and a half *per acre*, or eight bushels for three acres: same time, or the beginning of *October*. Experience shews early † sowings produce the best corn and greatest product, and, what is still more advantageous, ripens sooner.

Barley and fine oats.

On fallows: in drills ten inches apart; depth from three to four inches, having a regard to the soil. Seed from 20 to 24 gallons *per acre*; sow in *March* or the beginning of *April*; and this is suitable for oats.

For sowing on stubbles, viz. beans, pease and wheat, broad-cast sowings seem equivalent to drilling, provided the land be in good tilth: sow about three bushels and a half

* About the year 1740, I discovered insects to be the cause of smut, concerning which a deal has been said, to no purpose, by many writers on husbandry. R.

† Early sowings are not practicable on large farms for the whole: bean crops seldom admit the doing this so early. R.

76 THE FARMER'S TOUR

half *per* acre about the midst of *April*.
Likes to go in dry.

Beans, two methods.

First, Where nothing more is intended :
Strike furrows six or seven inches deep ;
rows two feet apart, equidistant ; seed may
be dropped in by hand, or put in by a
drill plough : no quantity can be ascer-
tained ; that depends on the size of the
grain,

Second, Beans and turnips, cabbages,
&c. intermixed.

Double rows * 18 inches apart, leaving
a space of three feet or forty inches be-
tween them, for turnips or cabbages ; if
the latter plant *one* row, if turnips drill *two*.
Sow early in *February* for the dwarf kinds ;
horse-beans about the middle of *March*.
This mixture is a great improvement.
Turnips seldom fail, and the bean crop is
not so much less as might be expected ;
often equal to the common plantings,
where

* Double rows are very easily made by my drill-
plough, by letting out only *one wheel* the designed
distance. The same may be done by any other wheel-
plough. Drilling is most complete for pease and
horse-beans. R.

where rows are close ; and I find cabbages do very well at two feet six inches apart, set between the beans. *Dwarfs* I prefer, because they come off much sooner than horse kinds do. Dung all we can here ; fifty loads *per* acre.

March, for pease and tares, seems the best season.

Succeed best on lays and fresh ground, whether sown or drilled : I prefer the latter, and drill double rows 20 inches apart, leaving a space of 30 inches between them, the better to destroy weeds by hand and horse-hoeing ; should go in dry and warm as soon as weather permits, especially the white early kind ; seed about three bushels in drills ; depth about five inches on gentle, dry land. Experience shews they often fail by lying shallow in dry seasons ; either fox or blight, or become full of insects, as most vegetables do when the sap stagnates, or the juices fail in ascending regularly.

Canary.

Loves a strong, rich soil, in good tilth ; four gallons of seed *per* acre ; sow in drills the beginning of *April*, equidistant rows, from 12 to 15 inches apart, and three deep :

78 THE FARMER'S TOUR

deep: hand and horse-hoe occasionally. Great profit has arisen from the culture of canary-feed. Wheat generally succeeds this crop.

My method of turnip culture you have already: *this* I dare pronounce, without vanity, the best ever published, no disparagement to others. However, there yet remains one thing very material herein never noticed, that I know of; namely, the drawing them up before they shoot for seed. This prevents their being injurious to the soil, and preserves them from rotting; for experience shews us, *frost* has not that power when withered, as when in full sap; and we find too our sheep eat them quite as well as those fresh drawn; and therefore this is well worthy the husbandman's attention, be assured: for it is but too well known, the common method of letting them stand for spring food proves extremely prejudicial to the land, besides being more subject to rot and decay.

Cole-seed and *Berlin* greens, vulgarly called *Jerusalem* turnips; best method of culture, about the 10th of *July* sow in drills, five inches deep, three pounds *per* acre;

acre; rows from 15 to 18 inches apart, according to the strength of soil; hand-hoes to be from seven to nine inches width for this husbandry; horse-hoe occasionally sufficiently deep; produce abundance of food.

Fed off with ewe sheep in spring; produce great plenty of milk for lambs, and withal makes a rich tilth for both barley and oats, wherein we sow clover and trefoile to the best advantage that can be; and sainfoine occasionally too, three bushels *per* acre broad-cast; for on these grass seeds we fold for wheat the ensuing year, which generally proves well in every respect: a great improvement this, unknown to nine tenths of the farmers in Europe. It is really amazing, to see what fine crops of wheat are obtained now from poor, thin lands, that heretofore have been deemed nothing worth; yet by these means are become very beneficial: a proof of all this your own eyes must have beheld in your tour through the *Isle of Thanet*, and land along the sea-coast, where is abundance of poor, thin, chalky soils, managed in this way. It is the work of time to re-

80 THE FARMER'S TOUR

move prejudices. I have ventured out of the old track a long time ago ; but had few followers for a great while ; but now my neighbours entertain a much better opinion of my practice than they did 20 years ago, having sufficiently found their account in following my methods.

Particulars of Mr. Reynolds's farm.

Acres 520. Rent 185*l.* per ann.

Keeps, 10 milch cows and a bull : breeds or weans 6 calves a year for the pail.

~~—~~ 20 hogs and pigs.

~~—~~ 10 horses, always stabled : summer feed, lucerne and clover.

~~—~~ 250 sheep ; these fold about 30 acres per ann. Folding deemed 20*s.* an acre, but this well done is undervalued.

6 Workmen and 6 Men servants
a shepherd. 2 Maids.

Wheat, 95 acres : best product in drills.

Beans, 50 ditto. Dung 20 acres per ann.
50 loads per acre mixed
with mould : carts hold
a chaldron, or 40 bushels ;

Barley, 50 generally dung as much

THROUGH ENGLAND. 81

Oats,	55	as we can for beans,
Pease,	9	which makes a good
Tares,	4	wheat tilth the ensuing
Canary,	7	year.

Sainfoine, 50 acres Succeeds best after fallows and turnips, &c. sown with barley, three bushels *per* acre, broad-

Clover,	20	cast, of each kind: Er-
Trefoile,	8	roneous to sow more.

Lucerne,	7	Broad-cast; better than
Grass-land,	70	drills for 4 years.

Burnet,	7	Not liked without other
		feeds by cow or beast.

Ditto with		Much esteemed, inter-
grass	8	mixed with grass, especi-
		ally sheep and lambs, and
		makes rich milk and butter.

Hops,	10	
-------	----	--

Coleseed,	20	Much best in drills hoed out.
-----------	----	-------------------------------

Common		
turnip,	7	Ditto.

Reynolds	7	Planted in 2 feet intervals;
ditto,		rows 20 inches apart.

Scotch cab-		
bage	3	

Large po-		
tatoes	$\frac{1}{2}$	

82 THE FARMER'S TOUR

Kidney

beans $\frac{1}{2}$ ac.

White Dutch

clover cut

for feed 1

Fallows 65

Very good: vulgarly

called honey-suckle

clover.

N. B. 36 acres, part

of this 65, is turnips,

coleseed, and other

greens designed for

sheep feed.

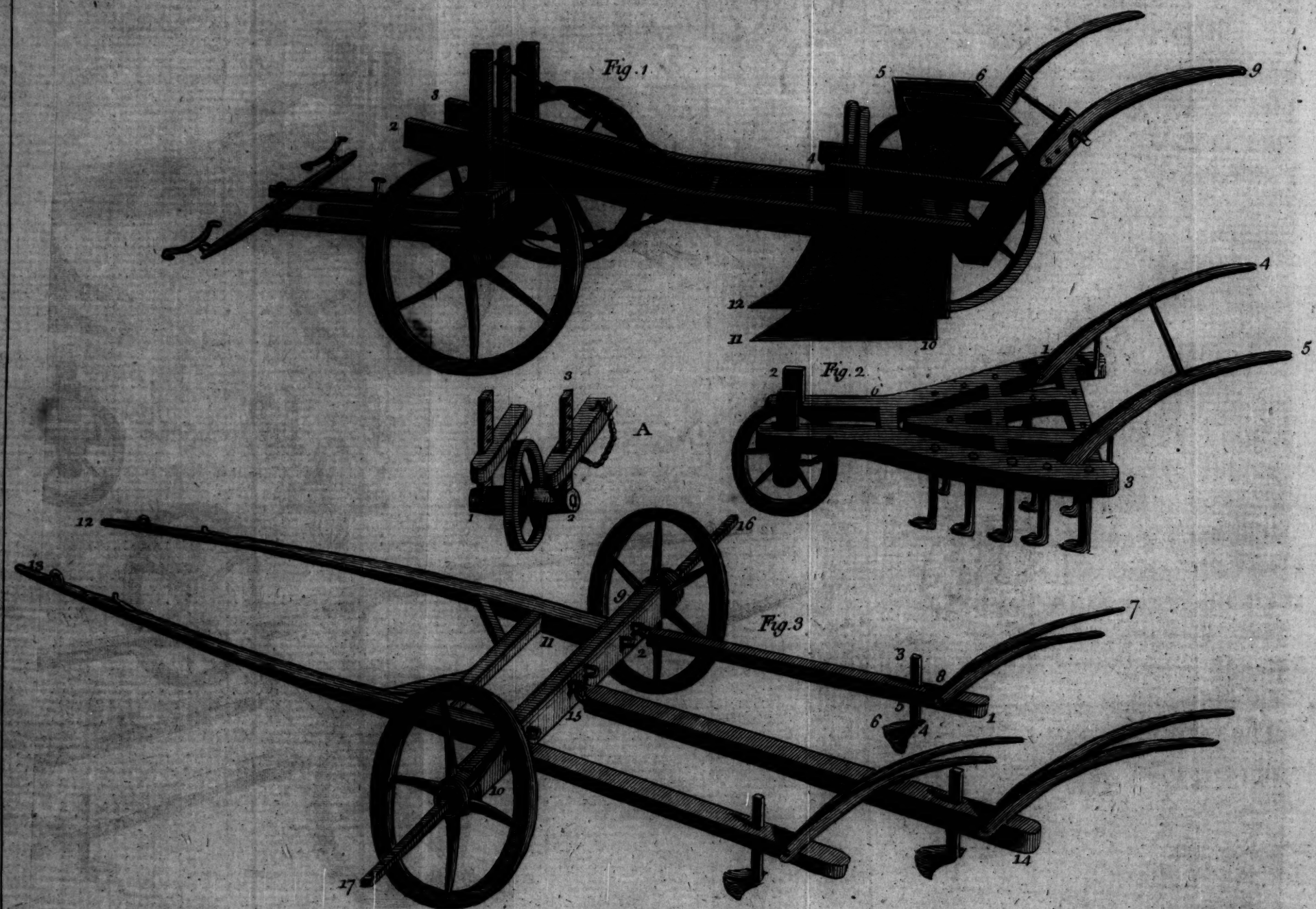
Madder, $\frac{1}{2}$ an acre.

To conclude: What has been said, is gained from abundance of repeated tryals in long practice: the result of these minutes, with every particular, would be too tedious now to transcribe; let the substance suffice: for I have nothing more in view than this, namely, the promoting the public good; seeing no man upon earth is better qualified than Mr. Young to write on the subject of husbandry, it will be an honour done to me, to see my work recorded in his ingenious annals of agriculture—A laborious undertaking truly. I heartily wish it may be crowned with success adequate to its merits. I am,

With all due respect,

Your most humble servant,

JOHN REYNOLDS.



THROUGH ENGLAND. 83

Plate XXII. Fig. 1. Is the drill plough used by Mr. *Reynolds*, and many other farmers in *East Kent*.

From 1 to 2	8 feet.
2 to 3	1
3 to 4	4
5 to 6	1 7 inches.
5 to 7	0 11
4 to 8	3 0
8 to 9	3 8
10 to 11	2 6
11 to 12	1 6
11 to 13	1 6
2 to 14	4 0

The bars, 4 and 7, vary their distances from each other, which allows of 2 rows at 1 foot, or two at 18 inches.

The diameter of the center wheel 28 inches.

Of the carriage ones 36 inches.

The price complete 6/.

Plate XXII. Fig. 2. is a nidget or ploughing harrow, used in hop grounds and fallows.

	Feet.	Inches.
From 1 to 2	4	6
1 to 3	2	8

G 2

From

84 THE FARMER'S TOUR

	Feet.	Inches.
From 4 to 5	2	0
2 to 6	1	6

The teeth 10 inches and $\frac{1}{2}$ long each, screws in. The diameter of the wheel 16 inches. The construction of the wheel part is seen in the representation, A.

From 1 to 2 1 foot.

2 to 3 1

The price 3*l.* 6*s.*

Plate XXII. Fig. 3. is a horse-hoe of Mr. Reynolds invention, for equally distant rows; a boy leads the horse, and three lads work the three hoes, by which means they have it in their power to vary with any little crookedness of the rows, or to cut deep or shallow at pleasure in any row. As the common shims work but one interval at a time with a lad, or man, and one horse; three, and three horses are necessary for three intervals; whereas this substitutes one boy for leading the horse in the room of 2 other horses, which is a great saving.

	Feet.	Inches.
From 1 to 2	4	8
2 to 3	4	0
3 to 4	1	4
5 to 6	0	8

5

From

THROUGH ENGLAND. 85

	<i>Feet.</i>	<i>Inches.</i>
From 7 to 8	3	0
9 to 10	3	6
16 to 17	7	0
14 to 15	6	6
11 to 12	8	0
12 to 13	2	0

The axletree 2 $\frac{1}{2}$ inches by 3 $\frac{1}{2}$ square. The hoes vary with the breadth of the intervals, both by varying the distance of the wheels, and also by varying the hooks to which the beams fasten in the axle.

Diameter of the wheels, 3 feet. Price 3*l.* 5*s.*

I shall not take my leave of this very worthy farmer, without congratulating *Kent* on the possession of a man who, in introducing turnips, was of signal service to her; and will probably equal that service by the introduction of cabbage turnips. All his time and attention are employed in moving beyond the sphere of common ideas; he is active and spirited, and richly deserves to be had in esteem by all the lovers of good husbandry.

From *Adisham* I turned towards the isle of *Thanet* by *Preston*. The soil about this place and its neighbourhood, is a rich loam,

86 THE FARMER'S TOUR

that lets on an average at 18s. an acre.

The course of crops in general here is,

1. Barley
2. Beans
3. Wheat.

Which is a very extraordinary one; they call it the round tilth, and is the most common course through all the rich parts of *East Kent*. It proves two things very strongly; *first*, the excellence of the soil; and *secondly*, the infinite consequence of drilling beans, and keeping them as clean as a garden: here is nothing to ease or clean the land but the bean crop: if that was managed in the slovenly way, common in many other countries, the farmers would all presently be ruined. They drill them in rows equally distant, from 18 inches to 2 feet, with a drill plough; and keep them perfectly clean by repeated horse and hand-hoeings. It is a most uncommon, and not an unpleasing sight to see drill ploughs and horse-hoes (all shims) lying about in every farm yard; yet here it is every where the case. Upon keeping the bean crop in excellent order all depends that ensures a crop of wheat, and then another of barley. This husbandry is an improvement of the old com-

THROUGH ENGLAND. 87

common course of 1. Fallow; 2. Wheat; 3. Barley—the two crops to a fallow; and as the beans are here managed, and the ground manured for them, not the wheat—it certainly is a great improvement. The crops are on an average 4 quarters *per* acre of wheat; 4 of barley, and 5 of beans; which are very considerable; but it will be worth a little attention to compare this course with another.

I. BEANS.

Expences.

One ploughing, - - -	£.0	7	0
Manure, 50 loads, 2s. 6d. -	6	5	0
Seed, - - - - -	0	6	0
Drilling, - - - - -	0	1	0
Shim thrice, - - - - -	0	2	0
Hand-hoeing thrice, - - -	0	8	0
Reaping and harvesting, -	0	10	0
Thrashing, 5 quarters, -	0	5	0
Carrying out, - - - - -	0	5	0
Rent, &c. - - - - -	1	5	0
	9	14	0

88 THE FARMER'S TOUR

<i>Produce.</i>		
5 Quarters, at 26 s.	-	£.6 10 0
Straw,	-	0 10 0
		7 0 0
Expences,	-	9 14 0
Produce,	-	7 0 0
Loss,	-	2 14 0

II. WHEAT.

Ploughing,	-	0 7 0
Seed and sowing,	-	0 13 0
Weeding,	-	0 1 6
Reaping and harvesting,	-	0 10 0
Thrashing, 4 quarters,	-	0 8 0
Carrying,	-	0 4 0
Rent,	-	1 5 0
		3 8 6

<i>Produce.</i>		
4 Quarters wheat	-	9 0 0
Straw,	-	0 15 0
Expences,	-	9 15 0
		3 8 6
Profit,	-	6 6 6

THROUGH ENGLAND. 89

III. BARLEY.

Expences.

Three ploughings and an half,	£. 1	4	6
Seed and sowing,	0	10	0
Mowing and harveſting,	0	6	0
Thraſhing,	0	4	0
Carrying,	0	3	0
Rent, &c.	1	5	0
	3	12	6

Produce.

4 Quarters, at 24s.	4	16	0
Straw,	0	12	0
	5	8	0
Expences,	3	12	6
Profit,	1	15	6
Ditto on wheat,	6	6	6
	8	2	0
Loſs on beans,	2	14	0
Clear profit <i>per</i> acre,	5	8	0
Which is <i>per</i> acre <i>per</i> ann.	1	16	0

This account of the round tilth is probably near the truth: the manure perhaps
does

90 THE FARMER'S TOUR

does not cost them so much, but then they reckon no produce in straw: Many, however, do not near manure a third of their arable every year.

Now instead of this course, let us suppose that of 1. Beans; 2. Barley; 3. Clover; 4. Wheat.

I. BEANS.

This the same as before.

Loss, 2*l.* 14*s.*

II. BARLEY.

This, the same as before, except the crop following the beans and the manure: it would in proportion to 4 quarters after wheat, certainly be 6.

Product 6 quarters, at 24 <i>s.</i>	£. 7	4	0
Straw, - - - -	0	15	0
	7	19	0
Expences, - - -	3	16	6
Profit, - - - -	4	2	6

III. CLOVER.

Expences.

Seed and sowing,	0	5	3
Carry over, - -	0	5	3

THROUGH ENGLAND. 91

Brought over,	-	£.0	5	3
Mowing, making, carting, and stacking twice, 4 loads <i>per</i> acre of hay,	-	1	0	0
Rent, &c,	-	1	5	0
		2	10	3

Produce.

4 Loads, at 30s.	-	6	0	0
Expences,	-	2	10	3
Profit,	-	3	9	9

IV. WHEAT.

This crop the same as the other: that its produce would be equal cannot be doubted. Profit, 6*l.* 6*s.* 6*d.*

Profit on the barley,	-	£.4	2	6
clover,	-	3	9	9
wheat,	-	6	6	6

		13	18	9
Loss on the beans,	-	2	14	0
Clear profit,	-	11	4	9

Which is <i>per acre per ann.</i>		2	16	2
By the other course,	-	1	16	0
Superiority,	-	1	0	2

92 THE FARMER'S TOUR

The product of clover thus managed, on land of 20s. an acre, must not be reckoned at less than 6l. an acre: if it is in a country that requires it to be fed, the thing is the same, only the expences are nothing: I have supposed it mown, as that includes the highest expences that can attend it. The price, of 30s. a load, is very cheap from the stack. But it should on all accounts be consumed at home. One very great objection to the round tilth is its exclusion of cattle on account of the arable: None can be kept: from whence, therefore, the 50 load of dung is to come I know not.

Barley succeeding wheat is bad husbandry wherever found; the land favoured in the change would require less dung. That it is bad management, cannot be doubted, from the barley crop not exceeding the wheat in quarters.—But a better course still, on this land, would be, 1. Cabbages, dunged for; 2. Barley; 3. Clover; 4. Wheat; in which the cabbages and clover hay would mutually assist each other in fattening small oxen or heifers, and raise a vast quantity of dung.

Mr.

Mr. *Harrison* of *Preston*, has tried some experiments on several articles of husbandry not common in his neighbourhood, which I viewed with great pleasure.

MADDER.

His first plantation of this root was prepared for by ploughing 10 or 11 inches deep in *October* with 6 horses; they did three roods a day. In *April* another ploughing was given, equally deep; it was then harrowed fine and rolled, upon which it was planted in double rows, at 10 inches, with intervals of 18 inches; and some in single rows equally distant, 2 feet asunder. The plants in both, 6 inches from each other. In the first method (in which was the largest plantation) there are 40,000 sets on an acre. They were kept clean from weeds, and the earth loose by horse and hand-hoeing. The crop was dug up with spades, 18 inches deep in the graft. The crop 16 C. wt. per acre; sold at 4d. per C. wt.

Expences per acre.

First ploughing,	-	-	£. 0	11	0
Second ditto,	-	-	0	8	0
Carry over,	-	-	0	19	0

94 THE FARMER'S TOUR

Brought over,	£. 0	19	0
Cutting the sets,	-	0	17 4
Planting,	-	1	2 9
Three hand-hoeings,	-	0	15 0
Horse-hoeing,	-	0	5 0

Second year.

Two hand-hoeings,	-	0	7 6
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Third year.

Hand-hoeing,	-	0	5 0
Digging up 2 spits deep,	-	8	13 10
Getting coals, drying, shaking up, and picking,	-	4	13 9
Rent, 3 years,	£. 3	0	0
Tythe,	-	0	15 0
Town charges,	-	0	9 0

	4	4	0
	22	3	2

Produce.

16 C. wt. at 4l.	-	64	0 0
Expences,	-	22	3 2
Profit,	-	41	16 10
Or per acre per ann.	-	13	18 11

Mr. *Harrison* has had other crops, of which he did not keep so particular accounts; they have, upon the whole, varied from 7 *C. wt.* to 16 *C. wt. per acre*: but a neighbour of his, Mr. *Simmons* of *Queen Court* near *Osprenge*, has had a ton *per acre*.

Observations.

It is very evident from this account, in which the expences run very high, that madder is an article of great importance for these deep rich soils; that it is very advantageous, appears clearly from the lowest crop Mr. *Harrison* has had, *viz.* 7 *C. wt.* being more than sufficient to pay the expences, which, in the infancy of the culture, must be considered as an extraordinary circumstance: the larger products of 12 to 16 *C. wt.* and even to a ton *per acre*, are much more profitable than hops; with the advantage of being a much more regular crop.

Hops about *Preston*, produce on an average 7 *C. wt. per acre*.—But about *Canterbury*, where rents of hop grounds are 3*l.* an acre, they yield 10 or 12 *C. wt.*

BURNET.

This grass Mr. *Harrison* tried; and respecting the point of cattle eating it, he gave me the clearest intelligence: every thing eat it freely: and what is decisive, he fatted several sheep on it. The butter was particularly excellent when his cows were in it.

From $1\frac{1}{2}$ acre he had as much feed as he sold for 20/.

Poor rates in this neighbourhood, 1s. 6d. in the pound; 40 years ago they were only 3d.—At *Addisham* 3s. 9d. Mr. *Reynolds* pays just as many shillings as his father did pence.—At *Littleburn* 5s.

I entered the isle of *Thanet* at *Sar*, and passed by *St. Nicholas* in the way to *Margate*. A mile and half into the island, I found rents at 1/ on an average; chiefly arable. I observed very little grass land. The course of crops the round tilth of east *Kent*:

1. Beans
2. Wheat
3. Barley.

They sown their beans three or four times, and hand-hoe them twice. The crops;

Wheat, 4 quarters.

Beans, 4 to 5 on an average:

Barley, 5.

The soil is a fine light loam on chalk; ploughs with great ease; and yet I observed them all stirring with 4 horses and a driver; which did not heighten my idea of the idleness of *Thanet* farmers. None but turnwrest ploughs.

About *St. Nicholas* the farms are large, and the farmers very rich.

Advancing towards *Margate*, I found great numbers of drilled crops of barley and wheat—the pease and beans universally so. Drilling in this whole line of country increases every year; full three fourths of the crops are now drilled, and in a few years there will not be a broad-cast one in the island. The barley and wheat are drilled in equally distant rows, 9 inches asunder; which narrow space they horse-hoe once or twice with a 4 or 5 inch slim; and hand-hoe it besides if there are any weeds in it; by which means, they keep their crops as clean as such narrow spaces will admit, and infinitely cleaner than any

98 THE FARMER'S TOUR

broad-cast crop can be. They drill of barley $2\frac{1}{2}$ bushels *per* acre; but when they sow broad-cast, 4 bushels.

The beans and pease are equally distant, from 16 to 20 inches apart; they thin them from 2 to 4 times, and hand-hoe once or twice. The crops;

Beans, 4 or 5 quarters.

Pease, 4 quarters.

Wheat, 4 quarters.

Barley $5\frac{1}{2}$ quarters—it rises to 7 or 8.

Their course has one variation; some practise the round tilth; but many throw in a summer fallow once in four, five or six years: this is not an improvement; surely they might take a drilled crop of turnips with wide intervals instead of this fallow; with their attention to keeping crops clean, such would be equal to any fallow. Their soil does extremely well for turnips, and some few are sown; this hint I venture from taking notice of their tillage—worse ploughing I never saw; with four stout horses, none of the ploughs at work more than scratched the ground—many of them went no more than 2 or 3 inches deep on one side the furrow, and only moved the surface
on

on the other; wrest baulking the whole. Summer fallows, with such tillage, are exceeded by fallow crops. But it is at the same time worthy of observation, that such fine crops are gained with such shallow ploughing; reason alone would tell us that deep ploughing was essential, but experience by no means justifies such a conclusion. —However, if shallow ploughing, contrary to ones ideas, is best, two horses, without a driver, would be fully sufficient.

There is one practice in which they are peculiar, and an admirable one it is. Drilled pease are always succeeded by wheat; but notwithstanding the constant horse and hand-hoeing they receive while growing, yet some weeds will be found after harvest; they have a method of extirpating these which deserves universal imitation. They have a large shim of the *Berkshire* kind, the frame work of which rests on the axle-tree of a pair of large wheels; old waggon fore wheels; the whole very strong; one man drives, and another lifts the shim at the headland; and while it is going on, rides on the frame of it. Plate XXIII. Fig. 1. is a sketch I took of it from memory; the

men were in haste, so I could neither draw, nor measure it on the spot; which is not of consequence, as the principle is so very plain that any wheelwright might construct it. They draw it with 4 horses. The cutting part is about 4 feet long.

With this shim they hoe all the land about 3 inches deep: which operation cuts through every weed, but leaves them in their place: and as 4 feet of land are done at a stroke, it works many acres in a day. Then the field is harrowed across, which collects all the weeds, as they yield at once to the teeth, being cut off by the shim; these are formed into heaps, and by some farmers carted to the compost dunghill, by others burnt on the spot, and the land is left like a well raked garden bed. So far from having the appearance of being a stubble, that any person would think it an exceeding fine fallow. Then they plough and sow wheat. The expence and trouble of this management are trifling, but the effect very great.

Another variation from the round tilth, is the sowing clover and trefoile for their sheep, which they break up at one earth
for

for wheat. Their flocks rise to 200 or 300; they fold them all summer on the lay.

The whole way to *Margate* the country is all open, but not common field.

About *Minster* the soil is the richest in the island; lets from 14*s.* to 20*s.* an acre; whereas the poorer parts, northwards, do not let for more than 10*s.* About this place the farms are all large; some to 500*l.* a year. The courses here are;

1. Turnips
2. Barley or oats drilled; some broad-cast
3. Trefoile and clover
4. Wheat; some broad-cast, and some drilled across the furrows.

This is the course for what they call the hill land. On the lower grounds it is as follows.

- | | |
|-------------------|------------------|
| 1. Pease or beans | 2. Wheat ditto |
| drilled | 3. Barley ditto, |

For wheat they plough but once after haulking; sow 3 bushels seed *per* acre, but drill 2 $\frac{1}{2}$. The crop 3 $\frac{1}{2}$ quarters, average of both soils. For barley they sometimes fallow and plough 5 times; but after turnips only 1 $\frac{1}{2}$: sow 4 bushels broad-cast, but drill 2 $\frac{1}{2}$; the crops after turnips 5 or 6

H 3 quarters

102 THE FARMER'S TOUR

quarters *per* acre; after a fallow 4 or $4\frac{1}{2}$; a difference that sufficiently shews the importance of turnips. The culture of oats is the same as that of barley; produce from 4 to 10 quarters; the average 7. They plough but once for pease; drill 4 bushels *per* acre; 10 rows to the perch; shim them two or three times, and hand-hoe them twice, at the expence of 2*s.* 6*d.* or 3*s.* a time. The crop 4 quarters *per* acre; many dwarf marrowfats at 3*l.* 10*s.* a quarter; but 2*l.* 2*s.* constantly.

For beans they plough but once, but deeper than for any thing else; it is given before *Christmas*; they drill them at the same distances as pease—chiefly the horse bean— $2\frac{1}{2}$ or 3 bushels *per* acre; shim them twice or thrice, and hand-hoe twice; 3*s.* an acre each: the produce 4 quarters *per* acre. They use some long-pod beans, which are dropt by women in the drills, 5 inches from bean to bean; and shim and hoe them like the others: the crop 5 quarters, at 24*s.* a quarter.

Coleseed or rape are not cultivated here; but Mr. *Jessart*, a very considerable farmer, has had some crops of the *Jerusalem* turnips,

nips, or rather kale, for the spring food of sheep; and found it answer well: but what much exceeds it, is Mr. *Reynolds's* turnip. Mr. *Jessart* has had some very fine crops of it; last year's came to 40 tons *per* acre, but 5 were sprouts; they were fed off by sheep late in *April*; and the best barley this year on his farm was after them. He has this year another field of them, which I viewed; and exceeding fine they are. Mr. *Edward Pet* of *Minster*, has now 3 acres of the same plant: he sowed the seed in *March*, and planted them the beginning of *May* in rows, 2 feet by 20 inches. The land was ploughed five times, but had no dung. The planting cost 14s. an acre. They have been shimmied once, and hand-hoed once. The luxuriance of the leaves is very great; they cover the land completely, and quite thick; and the roots are large. The leaves, Mr. *Pett* says, will all drop off in the frost, which gives an opportunity of shimming them again; he intends to feed them through *April* after the turnips are all done.

They plough four times for turnips; hand-hoe them once, and sometimes twice;

the value 3*l.* an acre; but the quantity inconsiderable; they feed them in general on the land; but Mr. *Jessart* has stall fed some bullocks on them.

Their clover and trefoile they feed with sheep, 4 to an acre; reckon the wheat better after trefoile than after clover; which surprized me.

On the hill land they have some sainfoine, but it lasts only from 6 to 10 years; they generally summer fallow after it for wheat; but Mr. *Pett* sows pease first to rot the turf. Mr. *Jessart* once tried coleseed hand-hoed after it. The crops of hay are from 1 $\frac{1}{2}$ to 2 loads an acre, at 30 *C. wt.* the load.

Summer tares they sow in small quantities for foiling horses.

Carrots have been tried on rich, *deep* soils, and, *it is said*, will not do; but this I do not understand.

The south of the island contains a great deal of rich marsh land, which also extends beyond *Sandwich*; the rent of it 20*s.*; it is used in fattening bullocks and *Romney* sheep; a bullock to an acre in summer, and a few sheep are kept in winter.

Large

THROUGH ENGLAND. 105

Large quantities of canary seed are raised in the island; there are generally about 150 acres in the parish of *Minster*. It is reckoned much more profitable than wheat; some is broad-cast, and some drilled 10 inches, equally distant rows, and hand-hoed twice. Mr. *Pett* has found great advantage in harrowing it as soon as up. The crops 2 or 3 quarters *per* acre, and the price from 2*l.* to 10*l.* a quarter; but generally 40*s.* or 50*s.*

In respect of manuring, they fold their sheep all the year; in summer on the grasses, and in winter on turnips, &c. 8 to a square perch.

Sea weed they reckon very rich; they mix it with dung and earth, and turn it over till rotten; lay 50 loads of the compost *per* acre, and find it of excellent service; never use it alone.

Mr. *Pett* strowed salt on barley and clover; 1 bushel to 10 perches; also coal ashes, 40 bushels an acre; the ashes beat the salt greatly, which did however some good to the barley, but killed the clover.

At another time he ashed 10 acres of barley;

ley; he thinks it paid him, but returned no profit.

Their farm-yard dung they lay on the summer fallows, or else on the wheat stubbles for barley: some is spread for beans.

Plate XXIII. Fig. 2. is a nidget, the structure improved by Mr. Pett.

From <i>a</i> to <i>b</i>	-	4 feet 6 inches.
<i>b</i> to <i>c</i>	-	4 4
<i>c</i> to <i>d</i>	-	3 8
<i>d</i> to <i>e</i>	-	1 3
<i>f</i> to <i>g</i>	-	1 0

The shares one foot from each other; the bottom of each is a triangle of six inches. Each share is shouldered in the frame, which renders the whole machine much stronger. *a* rests on a carriage.

Labour.

In harvest, 2*s.* 6*d.* a day; but commonly 3*l.* 10*s.* or 3*l.* for five weeks.

In hay-time, 1*s.* 6*d.* and 2*s.*

In winter, 1*s.* 4*d.* to 1*s.* 8*d.*

Reaping, 6*s.* to 12*s.*

Mowing and binding barley or oats, 4*s.*
mowing, 2*s.*

Hoeing turnips, 5*s.* to 7*s.*

THROUGH ENGLAND. 107

Thraſhing wheat, 1s. 6d. to 3s. per quarter.

———— Barley and oats, 1s. 2d. to 1s. 4d.

———— Peaſe, 1s.

Head-man's wages, 11l. and 11l. 11s.

Next man, 10l.

Lad's, 3l. to 6l.

Labour in general much dearer than formerly.

Poor-rates, 2s. to 3s. 6d. in the pound.

Particulars of a farm.

440 Acres in all 20 Turnips

100 Wheat 16 Horſes.

40 Sainfoine 200 Sheep in ſumm.

100 Barley 4 Cows

50 Clover and tref. 6 Men

50 Peaſe and beans 4 Boys

80 Fallow 8 Labourers.

Paſſing from *Sandwich* to *Deal*, I remarked, that the ſtubbles were not ſo clean as in the iſland. Land lets from 14s. to 20s. an acre. Their courſe the *round tilth*: they dung for beans 50 loads an acre of compoſt earth and dung; they drill all the beans in rows, equally diſtant, 20 inches aſunder, and clean with the ſhim and hand-hoeing; their peaſe alſo were drilled.

108 THE FARMER'S TOUR

drilled. Some barley and wheat the same; but not so much as in the island; they thin and hand-hoe it. Their crops of wheat are three quarters and a half *per* acre; their barley four quarters.

OBSERVATIONS ON THE HUSBANDRY OF EAST KENT, AND THE ISLE OF THANET.

This tract of country has long been reckoned the best cultivated in *England*, and it has no slight pretensions to that character. Their drill husbandry is most peculiar: it must astonish strangers to find such numbers of *common* farmers, that have more drilled crops than broad-cast ones, and to see them so familiar with drill-ploughs and horse-hoes.

The drill culture carried on in so complete a manner, is the great peculiarity of this country; their repeated horse and hand-hoeings keep the crops quite clean, and make them produce in an ample manner. The crops throughout this whole country are considerable, though so large a part of it is occupied by the round tilth, which is certainly disadvantageous.

Their

Their cleaning the pea stubbles for wheat in the island with the great *shim* is a practice, in praise of which too much cannot be said.

The culture of hops throughout *East Kent* is a very important branch of husbandry; they are extremely well cultivated, and would alone conduce, in no trifling manner, to raise an idea of general good management.

Madder also is here cultivated by farmers more than in any other part of the kingdom. This has been in a good measure owing to the culture of hops giving them notions of spirited management, unknown to the slovens in other counties. Canary seed is another instance, that they move out of the usual sphere of common husbandmen.

Mr. *Reynolds's* turnip advancing in culture among his neighbours, is a circumstance that would not happen in many counties.

It is also very observable, that all this good husbandry is practised on land, let (most of it) at 20s. an acre, with many tithes gathered, and compositions very
5 high,

110 THE FARMER'S TOUR

high, with extravagant poor rates. Such a total of rent could not be supported by bad or indifferent husbandry: it has forced the attention of accuracy, expensive management, and unremitted industry. These excellent farmers make a greater profit for themselves, after paying such high rents, from one acre, than the slovens in nine tenths of the kingdom do from five: a fact, which I must be allowed to think confirms the sentiments I have often expressed concerning low rents.

It is a pity, that such enlightened husbandmen will not discard the absurd practice of ploughing with four horses and a driver on land, which two, without a driver, would be highly sufficient for. It is likewise to be regretted, that they will persist in the round tilth, when the barley and wheat are not drilled and well hoed. It is a bad course, and unworthy of them.

L E T T E R XXII.

FROM *Deal* to *Dover*, the husbandry declines much: it is chiefly open corn-fields, but no drilling, and all the management seems much inferior to what I have just left.

Dover is one of the prettiest seaports I have seen: the situation is very romantic, at the foot of several bold hills, and the harbour in the center of the town, quite built round, is surrounded by quays, that are more agreeable to the view than any I know; and, though not so extensive as that of *Yarmouth*, yet much exceeds it in beauty.

From the castle, and the hills near the town on the road to *Hythe*, are noble views down on the town, the harbour, the shipping; and over the channel, the high lands in *France* are distinctly seen. About these hills the husbandry is good; the rents are about 15 s. an acre. Their course of crops is the round tilth; the
beans

112 THE FARMER'S TOUR

beans drilled in rows, equally distant, 18 inches asunder, and are both skimmed and hand-hoed: the crop four quarters *per* acre. The wheat is sown broad-cast, and yields three quarters an acre; the barley four. They have some coleseed for feeding sheep, and also some clover, which comes in with the bean stubbles for wheat.*

About

* From *Dover* to *Folkstone* are six or seven very romantic miles: the road runs along the edge of vast precipices, the shore very high and bold, and nobly varied. From the hill, going down into the latter town, the view is glorious: you look down on a fine sweep of inclosures, many of them grass, of the most pleasing verdure. The town, with its church on a point of land close to the sea. The edge of the lower grounds describe as beautiful an outline as can be imagined: the union of sea and land complete. We were fortunate in an azure sky and clear sun: so that the ocean presented a vast expanse of burnished silver. The hills of *France* save the eye the fatigue of an unbounded range of sky and water.

As you descend the hill, the prospect extends to the right; the vale opens, and spreads to the view a fine range of inclosures, bounded to the land by many hills, rising in a great variety of forms: the whole scenery magnificent.

About *Sandgate* castle, the round tilth continues; beans drilled, shinned, and hand-hoed; the produce four quarters; wheat three quarters, barley four. They have also some fine turnips, with which they feed bullocks in stalls, and in summer keep them in *Romney* marsh, as all the farmers here have farms in the marsh. They are in general from 80*l.* to 100*l.* a year here, besides from 50*l.* to 100*l.* in the marsh.

About *Hytbe*, the hill farms let at 8*s.* or 9*s.* an acre, on an average, though they include much good strong land. The low grounds are marsh land, at 20*s.* an acre, some of which is arable, and great crops are often gained from it. Five quarters *per* acre of wheat, and 11 quarters of oats, are not uncommon. Upon the best land, on the hills, the round tilth is practised. Wheat yields three quarters and a half, barley four quarters, and beans five. These are good soils; but the rough parts of the farms reduce the rents.

The marshes are very good: they reckon them more than to fatten one *Welsh* beast *per* acre, besides an allotment

114 THE FARMER'S TOUR

of sheep: the winter provision is grass, with some hay; their sheep is the *Romney* breed; they fat to 45 *lb.* a quarter. Every marsh farmer has both grazing and breeding land for sheep; he breeds enough for his own fattening, and sells the proportion of one hundred in a thousand.

Trevillian, a butcher at *Hythe*, hires 7 or 800*l.* a year in the marshes, and has above 3000 sheep.

The country, from *Hythe* to *Romney*, is remarkable: the road runs through vast tracks of old stoney beach, a stratum of mere stones, with here and there a despicable vegetation; but it is very observable, that the road itself, with a narrow slip on each side, is covered with a fine thick turf, of a good verdure. Now this can be owing to nothing but treading, and the rolling of the wheels: the clearest proof, that heavy rolling would reclaim these wastes, which seem not to be worth 6*d.* an acre, and make them profitable sheep pastures.

The sheep through this country are the *Romney* marsh sort, without horns. I observed great numbers admirably-made; short

short legs, true round barrels, of a fine size, and their fleeces remarkably white.

Romney marsh is the richest tract of grazing land in this part of the kingdom: it reaches from half way between *Hythe* and *Romney*, to *Rye*, and quite down to the sea beyond *Lid*. It is here said to consist of about 50,000 acres; and 20,000 more, equally rich, are contiguous to it. The whole lets, on an average, at about 20s. an acre. It is secured from the sea by a bank, the repairs of which are done at the expence of the tenant, and the amount raised by 2s. 6d. per acre scot over the 50,000 acres; but, if it amounts to more, it is borne by the landlord. The reason of the reparations being so high, is the absurd manner in which the bank is made: the slope of it against the sea is very short; so that, in many places, it is almost perpendicular; and, to remedy so great an error, the whole is thickly covered with faggot wood, kept down by small piles driven through it, with bars from pile to pile, mortised in them: all this requires perpetual repairs. Whereas, if the bank

116 THE FARMER'S TOUR

had been raised in the manner practised in the north-eastern shores of the kingdom, of giving it a vast base, and consequently a gentle but extended slope, and all of earth turfed, the repairs would in many years be very trifling. Such banks, well constructed, stand the utmost fury of the north-east winds, united with spring tides; but when the slope is short, the immediate weight of water is irresistible without such enormously expensive works, as these of *Romney marsh*.

This vast tract of land is applied chiefly to breeding and fattening sheep; the number of beasts is very inconsiderable.

As I enter *Sussex* to-morrow, you must allow me here to conclude myself,

Your's, &c.

LETTER XXIII.

FARMS about *Rye* rise from 40*l.* to 400*l.* a year, but in general from 60*l.* to 100*l.* a year. Marsh land lets from 20*s.* to 25*s.* an acre; the arable at 15*s.* There are many hops in the neighbourhood; but the grounds not at distinct rents: the farmers have their hops on the best soils of the farm.

Their courses are;

- | | |
|-----------|--------------------------|
| 1. Fallow | 5. Beans |
| 2. Wheat | 6. Oats |
| 3. Beans | 7. Clover and ray-grass. |
| 4. Wheat | |

- And,
- | | |
|-----------|--------------------|
| 1. Fallow | 4. Clover |
| 2. Wheat | 5. Wheat or pease. |
| 3. Oats | |

Their beans are all broad-cast, but hand-hoed twice, at the expence of 10*s.* an acre; the product from four quarters to eight; average five.

Pease, broad-cast, without hand-hoeing; crop three quarters and a half.

118 THE FARMER'S TOUR

Wheat, three quarters.

Barley, four to eight; average, five.

Oats, five and a half.

Many oxen are used here for draft: a farm of 200 $\frac{1}{2}$ a year has 16 draft oxen, and three horses on it: they reckon them excellent, if the land is dry; but if wet, they poach, not from their weight more than horses, but from going double. They encrease here every year, contrary to every other country I know. I enquired particularly into the reason of this, and they asserted, that it was owing merely to their finding them more advantageous than horses. The oeconomy of their beasts is as follows.

A farmer, who keeps six cows, will rear all their calves; consequently he will have 18 young cattle in three years. At that age he puts the oxen from them to work, and works them till five years old, some farmers till seven, and then fat and sell them. When the ox is put to work, at three years old, he is worth, as prices go now, 6 $\frac{1}{2}$ l. but after working him two years, he would sell lean for 10 $\frac{1}{2}$ l. Here, say they, lies the great advantage of oxen:

THROUGH ENGLAND. 119

his growth pays a considerable part of his keeping, and his work much more than does the rest: so that great part of his labour is gained for nothing. But, lest it should be thought, that the keeping so many cattle more than is worked might run up the expences higher than with horses, it will not be improper to calculate that point. His stock is always,

6 Calves, one year old.

6 Ditto, two years old.

6 Young cattle, three years old.

6 Oxen at work, four years old.

6 Ditto, five years old.

This is his constant stock: his expences are as follow.

Suppose the calves purchased at

10s. - - - £. 3 0 0

Keeping six calves a year, at 6d. 7 16 0

Ditto six ditto, at 1s. - 15 12 0

Ditto six young, at 1s. 6d. 23 8 0

Ditto twelve working, at 2s. 62 8 0

Total, 112 4 0

Product per ann. six oxen sold, 60 0 0

Remains, the expence of twelve

working oxen, 32 4 0

Which is per ox, 4 7 0

120 THE FARMER'S TOUR

This account seems to decide, that this breeding and keeping one stock under another is highly advantageous; for if the working beasts alone are kept, their annual expence is 62*l.* 8*s.* whereas in the method here stated, it comes to 10*l.* less. Another circumstance to be considered is the profit made by the farmer, at the above prices of keeping; for if his expences only be reckoned, the account must be drawn up differently, and this will bring it nearer the truth.

	Acres
For 12 oxen worked, it will be an	
ample allowance to assign them	
three acres a head of grass, at 20 <i>s.</i>	
an acre, for the whole year,	36
Six cattle three years old, - - -	12
Six ditto two years old, and six one	
year old, - - -	9
Total,	57

This allowance supposes them to eat hay only in the winter; but these farmers keep them most of the winter on straw, at a much cheaper rate.

THROUGH ENGLAND. 121

57 Acres rent, -	£. 57	0	0
Tythe, suppose -	8	0	0
Rates, -	8	0	0
Total, -	73	0	0
Making, &c. hay, suppose -	10	0	0
Six calves, -	3	0	0
Total, -	86	0	0
Product of six oxen fold, -	60	0	0
Expences of 12 working oxen, -	26	0	0
Or <i>per</i> ox, -	2	3	4
Suppose shoeing -	6	5	0
	28	8	4

Decline of value and farrier have no place in this account. Now let us turn to the horse.

Allow him three acres, like the ox;

rent, -	3	0	0
Tythe and town charges, -	0	18	0
Making hay, -	0	10	0
One bushel of oats <i>per</i> week,			
for 30 weeks, at 2s. 3d. -	3	7	6
Carry over, -	7	15	6

122 THE FARMER'S TOUR

Brought over,	-	£. 7	15	6
Chaff,	-	-	6	5
Farrer, suppose	-	-	0	10
Decline of value, suppose	-	2	0	0
Shoeing,	-	-	0	5
Total,	-	10	15	6
The ox,	-	2	8	4
Superiority,	-	8	7	2
Suppose one horse, according to the common vulgar idea, equal to two oxen, then we must deduct again,				
Yet there remains a superiority	-	5	18	10

One horse costs as much as four oxen and a half.

It is from hence sufficiently evident, that these farmers are quite right in giving the preference to oxen. In the use of them however they are as evidently wrong; they draw a plough with six or eight for one acre a day, and eight oxen are used for carrying 60 bushels of wheat, but do not carry so much on bad road.

In

THROUGH ENGLAND. 123

In summer they feed them in pastures and on clover; in the winter, they give them hay in the morning, and straw at night, and on this food they plough an acre a day; and on straw alone they will do six hours work. Many farmers do all their winter ploughing on wheat straw alone; but it is not reckoned good management.

An acre of marsh land will fatten an ox of 60 or 80 stone, (14*lb.*) and some of it a sheep besides. The latter are 24 or 25*lb.* a quarter: a fat wether sells in general at 25*s.* some 35*s.*

LABOUR.

In harvest, 2*s.* 6*d.* to 3*s.*

In hay-time, 2*s.*

In winter, 1*s.* 6*d.*

Reaping, 10*s.*

Mowing corn, 1*s.* 6*d.* to 1*s.* 8*d.*

Thrashing wheat, 2*s.* 6*d.* a quarter.

————— oats, 1*s.*

————— beans, 1*s.* 6*d.*

Head-man's wages, 10*l.* 10*s.*

Next ditto, 7*l.* 7*s.*

Lad's, 3*l.*

Maid's, 3*l.*

PRO-

124 THE FARMER'S TOUR

PROVISIONS.

Bread, 1 *d.* $\frac{1}{4}$ per lb.
 Butter, 7 *d.*
 Cheese, 4 *d.* $\frac{1}{4}$
 Beef, 4 *d.*
 Mutton, 4 *d.*
 Veal, 4 *d.*
 Pork, 4 *d.*
 Bacon, 6 *d.*
 Potatoes, 8 *d.*
 Milk per pint, $\frac{1}{4}$ *d.*
 Labourer's house-rent, 3 *l.*
 — — — firing, 3 *l.*

Particulars of a farm.

400 Acres in all	20 Swine
100 Arable	40 Acres wheat
300 Grass	40 Clover
300 <i>l.</i> Rent	10 Oats
16 Draft oxen	10 Pease and beans
3 Horses	2 Men
12 Cows	1 Boy
200 Sheep	1 Maid
36 Young cattle	3 Labourers.

Swing ploughs chiefly used here.

The fifteen miles from *Rye* to *Harshurst* are very agreeable to travel; the country is all hill and dale; the prospect extensive

THROUGH ENGLAND. 123

extensive over a rich varied woodland; the road is good, and leads through many scattered villages, with numerous single cottages remarkably neat, well built, clean and snug; little gardens well kept, the hedges regular, and all clipt; many of the walls white-washed, the paling whole and in order, and even the pigsties tiled, and quite neat and strong; the whole uniting to raise the most pleasing idea of warm comfortable inhabitants: one's humanity is touched with pleasure, to see cottages the residence of chearfulness and content. Happy people! humble Pleasure sparkles in their eye, and Health herself sits enthroned in their cheek — a subject for

The *pleas'd* historian of the *chearful* plain;
But nothing either *sad* or *pensive* in it.

A country *so* decorated is beautiful indeed, and more entertaining to travel through, than if splendid temples and proud turrets arose on every hill. Such ornaments are in the power of every country gentleman: pity they do not oftener use them.

126 THE FARMER'S TOUR

Industrious Britons ought all to live thus; and did our laws co-operate with the blessings providence has showered on this happy kingdom, all might live so.

There are many iron furnaces in this country, which is the market for the large quantity of wood seen here.

Rents run at 12 s. on an average to *Battle* 16 s. The course of crops,

- | | |
|-----------|-----------------------|
| 1. Fallow | 3. Oats, or pease, or |
| 2. Wheat | beans. |

The products, wheat 3 quarters, oats 4 $\frac{1}{2}$, beans 4 $\frac{1}{2}$, and pease 3. Not many turnips sown; but when they do, it is remarkable that they fallow after them for wheat, under the idea that their land will not do for wheat. They use a plough here on purpose for striking the water-furrows in land sown with wheat: it is small and light, with a double mould-board. This implement is a sign of good husbandry.

About *Hawkhurst* the soil is various: there are both sandy fields and clay ones. A course of crops common here is,

1. Tur-

1. Turnips; but on 4. Oats
land rather too 5. Clover and ray-
stiff 6. Grass

2. Fallow 6. Fallow
3. Wheat

Of all the execrable systems, sure none
can beat such capital strokes of barbarism,
as cultivating turnips without barley, and
clover without wheat!!

Another course is,

1. Fallow 4. Turnips
2. Wheat 5. Fallow
3. Pease or beans 6. Wheat.

They plough three times for wheat, sow
three bushels *per* acre, and gain upon an
average two quarters and a half. They
give two or three earths for barley, sow
four bushels an acre, the crop three and a
half or four quarters. For oats they plough
but once, sow five bushels, the crop four
quarters. They never hoe either their
pease or beans.

For turnips they give three ploughings,
hand-hoe once or twice, and use them for
feeding sheep and beasts; but their land
too heavy to feed off. There are many
hops; the labour attending them is

the

128 THE FARMER'S TOUR

the poles are 8*s.* *per* thousand, and 3000 to an acre, which last six years; drying 6*s.* *per* C. *wt.* average product 7 C. *wt.* and the price 3*l.* There are many hops grown in the 18 miles to *Maidstone*. Marle is a principal manure with them; they have it red, grey, blue and yellow; blue they reckon the best, dig it in pits on the sides of hills, and lay 250 or 300 loads an acre, at 8 bushels each; the digging costs 5*s.* *per* hundred load; four pair of oxen and a horse, and two or three boys for drivers; four carts, each two oxen and one horse, carry 100 loads a day. It lasts good from five to eight years; on light sandy soils it brings great crops, but not on wet ones: they assert, that it binds such so close, that the water cannot get off.

Lime they lay on their fallows for wheat, a *carriage* an acre; that is, a waggon load, at 1*l.* 1*s.* at the kiln: it lasts but two crops.

The best farmers hollow-drain their meadows.

Their tillage is chiefly performed with oxen, which they prefer greatly to horses.

At

THROUGH ENGLAND. 129

at breaking up the fallows in spring they use (to their shame be it spoken) 8 or 10 in a plough; but after that 6: foot ploughs are generally used. If horses are worked, 4 in a plough. They always plough an acre a day; but the depth not more than 4 or 5 inches. The price of ploughing 6s. to 10s. an acre. 12 Oxen and 6 horses they reckon necessary for 100 acres of arable land; but they will earn some money by carting.

Good grass land lets at 20s. an acre; they graze it with sheep and beasts.

A cow gives 3 or 4 gallons of milk per day.

Their flocks of sheep are small; they never fold them.

Particulars of a farm.

150 Acres in all	20 Acres Wheat
70 Arable	20 Oats
80 Grass	5 Barley
£. 100 Rent	5 Clover
8 Oxen	12 Fallow
4 Horses	4 Hops
8 Cows	2 Men
100 Sheep	1 Boy
24 Young cattle	2 Labourers
6 Fattening beasts	1 Maid.

130 THE FARMER'S TOUR

About *Burwash* land lets at 10s.; there is much more grass than arable, with which they fatten bullocks and sheep; the latter chiefly the west country breed. Their course of crops;

1. Fallow
2. Wheat
3. Oats
4. Clover, take one hay crop, then fallow for
5. Wheat.

They have no turnips, and very little barley. Wheat yields 3 quarters *per* acre; oats 4; and clover 1 $\frac{1}{2}$ load of hay. Some farmers mow their clover for hay, and then feed it; some leave the first growth for feed, but the second is reckoned the best; which is remarkable. They use 8 oxen and a horse in a plough, and do an acre a day; their oxen have all hay in the winter. To 50 acres of arable land, and grass proportioned, they reckon 4 horses and 8 oxen necessary.

Farms rise from 40*l.* to 200*l.* a year.

From *Burwash* to *Lewis* the country is various: About *Heffel* much waste land; black moors, whose spontaneous growth is ling,

ling, whins, and grafs. The two latter, fure proofs that thefe foils are by no means irreclaimable. In general the upper stratum is a black, fibrous peat, full of roots, which is undoubtedly a *rich* foil; it is in fome places 18 inches deep, in others a foot, and in fome 6 inches: under it the foil varies; it is a light loam, a fand, or a gravel, but not much of the laft. Some farmers have taken in and cultivated fmall parts of it: their method has been to pare and burn it, which cofts 1*l.* 1*s.* *per* acre; then they plough, and fow oats, of which they get 5 quarters; after the oats they fallow for wheat, and get 2 or 2 $\frac{1}{2}$ quarters, fometimes 3; after the wheat, oats, 4 quarters an acre, and fo on—keeping it constantly in tillage; very few of them ever laying it down. They never fow turnips on it.

The only manure they apply is lime, of which they lay a load or a load and half an acre. A kiln of lime cofts 12*l.* and contains 6 loads: they feldom ufe it for lefs than 40*s.* or 3*l.* *per* acre.—The improvement is reckoned, on the whole, very unprofitable work by moft of the farmers.

On this notion I must beg leave to offer a few remarks; the truth of it does not appear from the above crops: but supposing the fact, can any person wonder at it, while their management is so very contrary to the nature of the soil.

1. Oats; 2. Fallow; 3. Wheat; 4 Oats. —What a course for land that requires solidity, and does better in grass than any thing else? Summer fallowing this porous, fibrous, network of roots, is poison to it; many ploughings should not be given it, even for turnips, if they were not necessary for the total destruction of the ling and whins. The paring and burning, and liming, are the only parts of their system that are sensible.

After the paring and burning, turnips should be sown on one ploughing: the crop fed on the land on every account. After this, a second crop of turnips on one or two ploughings; fed also on the land; then oats, and with them plenty of grass seeds; none better than white clover or rib grass, but not ray. It should then be kept under grass, and no doubt but it will annually improve; the more it is rolled the better.

In

THROUGH ENGLAND. 133

In case this course of tillage should be found too short to destroy the ling, &c. then let the course be; 1. Turnips; 2. Oats; 3. Turnips; 4. Oats, with grasses—which will effectually do it on any soil.

As to lime, too much cannot be laid on these virgin lands, which, though neglected, are certainly as rich as any; and were it not for the constant spontaneous crop, would be found absolute dunghills; which is the case with those that yield no growth, *viz.* the real black bogs. The sooner the lime is laid on, the sooner the benefit is reaped of dissolving the roots, and fitting them for the purposes of vegetation. In the north of *England* they spread it with the ashes of the paring. I have seen various soils of this nature highly improved by following this method; the undertaking will not be found unprofitable.

I brought away a quarter of a peck of the black soil to compare it with others, and I find it is the same that have been thus improved.

About *Framfield* their course is,

1. Fallow

2. Wheat

134 THE FARMER'S TOUR

3. Oats

4. Clover, mown once, then fallowed for

5. Wheat.

They lime their fallows with from 2 to 5 loads *per* acre, at 12s. a load, each 32 bushels. They have neither barley nor beans, thinking their land too weak for either. Wheat yields 2 quarters *per* acre; oats $4\frac{1}{2}$. They have much grass land, and apply it all to breeding.

I observed here some black faced little sheep with horns.

To *Lewis* the country is various; the soil not so rich as in many parts of *Sussex*.

Mr. *Poole* at *Hook*, in the way from *Lewis* to *Grinstead*, has for many years tried various experiments in husbandry, and particularly in drilling.

Between 30 and 40 years ago he began the new husbandry, in Mr. *Tull*'s method, from seeing it practised by the late earl of *Hallifax*; he tried it several years with much attention; but it turned out uniformly unprofitable. Twenty years ago, having thus repeatedly found that wide intervals were not to be depended upon for a crop, he contracted them to equally distant rows?

to which he has adhered ever since, and found the method regularly profitable.

Wheat, barley, and oats he has constantly drilled, at 9 inches.

Pease, double rows, at 9 inches, with intervals of 2 feet; some equally distant, at 18 inches.

Turnips equally distant, 20 inches.

A course of crops which he practises much, is the following.

1. Drilled turnips.
2. Drilled barley.
3. Clover and trefoile mixed.
4. Wheat broad-cast.
5. Dilled pease.

The clover mown once for hay and then for feed; sometimes winter tares instead of the pease.

For turnips, he prefers soap ashes to all other manures; he uses 4 loads an acre, 32 bushels each, at 3*d.* a bushel: but he has a drill plough with a manure hopper; if that machine is used, 1 load an acre is sufficient. He horse-hoes them twice or thrice; 2 horses, 2 men, and 1 boy will horse-hoe 6 or 7 acres a day, with his horse-hoe, which is a system of 5 small shims moving

136 THE FARMER'S TOUR

in one frame. He is not clear that the crops are greater than the broad-cast ones, but the expence of hoeing is much less, not more than as 3s. to 10s. He has kept 30 beasts 3 months on $5\frac{1}{2}$ acres drilled.—He used to plough three times for turnips, but has lately tried one earth, and finds it to answer better on land that is folded, from the dung not being buried.

Of barley he drills 2 bushels to an acre, after the clover is sown, but no hoeing; if no seeds with it, then it is hoed by a light shim drawn by a man; the crops are from 5 to 7 quarters. The *Kentish* way of hoeing in the clover, after the barley is up, appears to be preferable. The following experiment was tried by Mr. Poole to ascertain the respective merits of the drill and broad-cast methods.

Experiment, No. 1.

Manured an acre of land with 40 loads of home made dung; and sowed it with 7 bushels of barley; the product 5 quarters. At the same time manured another acre with 4 loads of malt-dust, and drilled it with $1\frac{1}{2}$ bushel; the crop 6 quarters 7 bushels.

THROUGH ENGLAND. 137

Broad-cast.

40 Loads dung, *	-	-	£.2	0	0
Carriage, *	-	-	0	5	0
7 Bushels feed, at 2s.	-	-	0	14	0
			2	19	0
5 Quarters, at 2s.	-	-	4	0	0

Drilled.

4 Loads malt dust,	-	-	1	8	0
1½ Bushel feed,	-	-	0	3	0
			1	11	0
6 Quarters 7 bushels, at 2s.	-	-	5	10	0
Drilled crop,	-	-	6	7	0
Seed,	-	-	0	1	2
Clear crop,	-	-	6	5	2
Broad-cast crop,	2s.	5	0	0	
Seed,	-	-	0	7	0

			4	1	0
Superiority of the drilled	-	-	2	4	2
Expence of manure and feed					
broad-cast,	-	-	£.2	19	0
Ditto drilled,	-	-	1	11	0
Superiority,	-	-	1	8	0
Which at 2s. a bushel, is 1 quarter 6 bushels more,					

* These are Mr. Poole's prices; both appear remarkably low.

138 THE FARMER'S TOUR

Total superiority of the drilled, 4 quarters, 2 bushels, 2 pecks. It was drilled in equally distant rows, at 9 inches, and had no hoeing, as clover was sown with it.

Mr. Poole cuts the first crop of his clover and trefoile for hay, and gets $1\frac{1}{2}$ load per acre; the second crop for seed, of which he has from 2 to 9 bushels; average 3.

He sows $2\frac{1}{4}$ bushels an acre of wheat, broad-cast, and gains about 3 quarters; drilled, with manure on it, he seldom fails of 4.—The manures he drills are, soap-ashes—malt-duft at 3*d.* a bushel—coal-ashes—soot—wood-ashes—He mixes them altogether with lime and fine mould,

Experiment, No. 2.

Lucerne he tried for 5 years, the rows 2 feet asunder, and some 20 inches; he kept it as clean as he could, but never was able to preserve it free from weeds, though he bestowed the expence of digging between the rows: he cut it seven times a year. The borders of the field, being very thick with grass, were pared and burnt, and the ashes spread on the field; this was done to destroy the lucerne; but the year following,

THROUGH ENGLAND. 139

following, notwithstanding the plants had all been cut through under ground, the lucerne sprung up with fresh vigor; only the grass and weeds were destroyed. Mr. *Poole* apprehends the best method of managing lucerne, would be to sow it broadcast, and plough it with a broad fin.

Experiment, No. 3.

Sainfoine this gentleman tried on a very deep loam; it did excellently for 3 years; he then manured it, and that brought up such quantities of grass and weeds, as to choak it up: but is well convinced that it would have done very well, notwithstanding the depth of the soil and there being no rock under it.

Experiment, No. 4.

Accident discovered to Mr. *Poole* a new turnip; on cutting through some, he observed one that was quite yellow through the root; a peculiarity that made him examine the leaf, to discover if any more were in the field; he found it rather a paler green than the common turnips; by this mark he discovered several more of them, by

140 THE FARMER'S TOUR

by which he gained a quantity of the seed, and cultivated them with great success. The excellency of them is the weight; a root weighs doubly heavier than any other sort of the same size.

Experiment, No. 5.

Potatoes Mr. Poole tried in 1769, in the lazy-bed manner; he struck an acre of land into divisions, each of 40 feet wide; every other bed was dunged and earthed from the intermediate one; so that only half an acre was occupied by the potatoes. They were planted 18 inches square; in which manner 10 bushels did the half acre; they were hand-weeded; and the product was 475 bushels. It may be remarked that a whole acre was occupied; but the intervals of 40 feet were made so wide on account of the land being intended for an orchard; the potatoes by no means required such a breadth, or half of it—however I shall suppose them to have taken up 3 roods of land, the crop is then 633 bushels *per* acre—a very noble crop!

In the application of it, he tried an experiment which is of decisive utility; he fattened hogs with the crop in lots.

THROUGH ENGLAND. 141

No. 1. Lot, was fattened with 1-3d of barley meal mixed with 2-3ds of potatoes boiled.

2. With barley meal.

3. With pease.

The two latter equal; but No. 1. beat them both; the hogs fattened better and quicker.

Experiment, No. 6.

Mr. *Poole* tried burnet in small quantities; he gave it to all sorts of cattle; none would eat it. But the growth through winter was very luxuriant.

Hollow drains Mr. *Poole* tried many years ago, and has continued the practice ever since with the utmost success; he was for some time much laughed at by the neighbouring farmers, but they now follow his example with equal success.

A circumstance he mentioned to me, concerning this part of husbandry being formerly in practice, deserves recording. Near an 100 years ago a very large oak, 200 years old, was cut down at *Hook*. In digging a ditch through the spot where the old stump was, on taking up the remains of

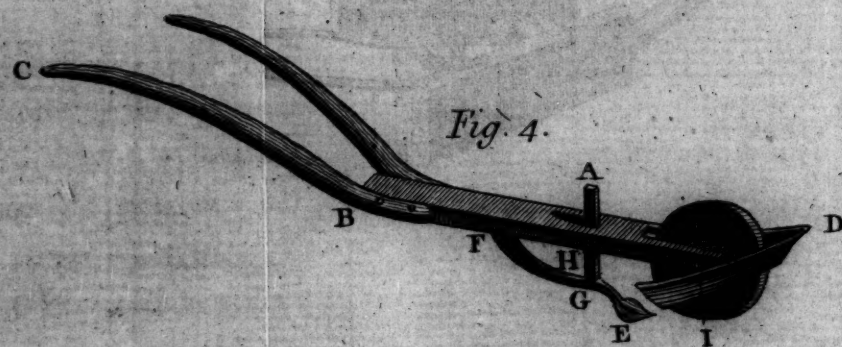
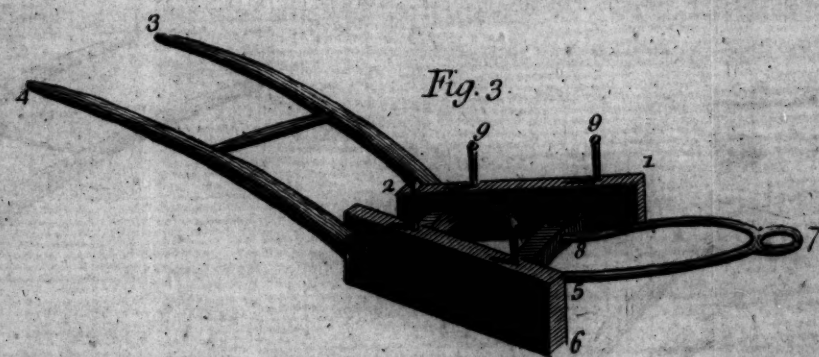
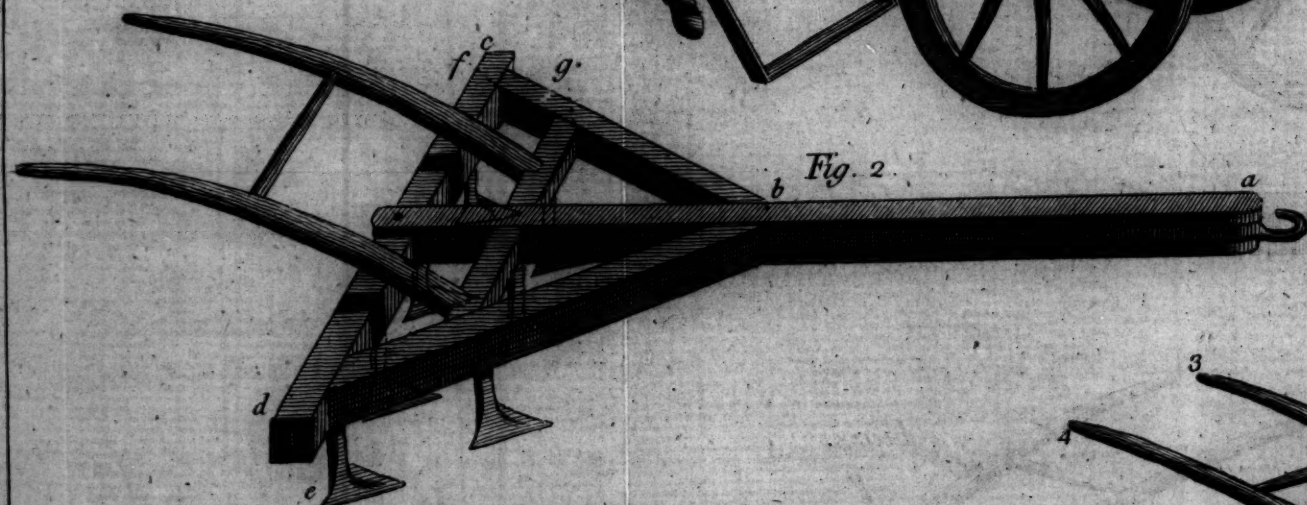
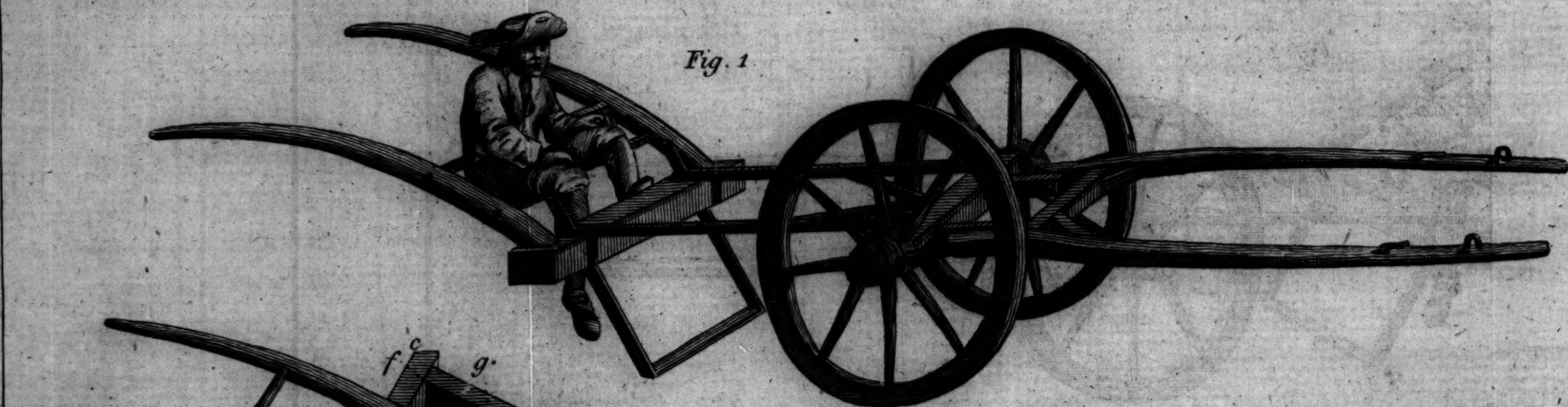
142 THE FARMER'S TOUR

of it, a drain was discovered under it filled with alder branches: and it is very remarkable, that the alder was perfectly sound; the greenness of the bark was preserved, and even some leaves were found; on taking them out they presently dropped to powder. It is from hence very evident, that under-ground draining was practised more than 300 years ago in this kingdom: that the husbandry was common among the *Romans* appears from *Columella*—We find also, from hence, that alder is, of all other woods, the best for filling drains with; probably no other wood, unless it be aquatics, would endure near so long: bushes are generally used: but from this instance, if I could not get alder, I would use fallow or willow.

This gentleman uses a double plough to one beam, with which he does double the work of the common sort, with the same horses.

Plate XXIII. Fig. 3. represents the machine with which he earths up his pease in equally distant rows.

From 1 to 2	2 feet.
2 to 3	3
1	From



THROUGH ENGLAND. 143

From 3 to 4 1 foot 2 inches.

1 to 5 2 0

5 to 6 0 10

7 to 8 1 6

The cross bars 3 inches wide. The wings contract or widen by the pins 9.

This tool he finds of excellent use; no hand-work equals it in neatness and accuracy.

Plate XXIII. Fig. 4. is the hoe drawn by a man, instead of a horse-hoe.

From A to B. 2 feet.

B to C. 2 6 inches.

D to E. 1 8

E to F. 1 6

G to H. 1 0

I. The hook by which the man draws.

The wings on each side the wheel, 6 inches wide; diameter of the wheel 12 inches.

Mr. *Holroyd* of *Sheffield Place*, since his residence in this neighbourhood, has given a spirited attention, as a justice of the peace, to the abuses among the parish officers in matters of poor and rates. The latter ran up to a most extravagant height, owing to the farmers playing into each others hands.

They

144 THE FARMER'S TOUR

They paid weekly allowances, and house-rent to labourers in full health and strength, and many children were left quite untaught in any industry till 15 or 16 years old. They agreed among themselves, that *themselves* should have allowances from the parish, of 1s. 6d. or 2s. a week *per* lad, for taking them as servants, besides being partly cloathed at the parish expence also; while many of the lads were worth near as much wages, as they were paid for taking them, and maid-servants were also taken in the same manner.

Mr. *Hobroyd*, disgusted at such knavery, made extracts from the poor laws, which he gave the farmers; and himself undertook the office of overseer. He has apprenticed the smallest boys and girls to the richest farmers; and the stoutest lads and girls to the poorer farmers, without any allowance, except 25s. a head for cloathing. Many of the farmers were much against this plan; so that six paid the penalty of 10*l.* each, rather than agree to terms that so fully proved the tendency of their former transactions—and these forfeitures have cloathed the children. Whoever asks relief of the

parishes on account of large families, he relieves, by apprenticing out the children that are of a proper age; so that none are otherwise relieved but the old and infirm.

He further allows of no parish feasts, the expence of which used all to be charged to the parish account, and was no trifling article; and he strikes from out their accounts all sums, the particular disbursement of which is not specified. These rules of conduct have been attended with such an effect, that the rates, which used to run at 4s. 6d. in the pound, he is clear of reducing, very soon, to 1s. 6d. at the same time that the old people are taken much better care of: before, no attention was given to any thing but great families, which the officers made the source of plunder; and the farmers by having apprentices depend on keeping them, and find it their interest to make them industrious.*

There

* Mr. Holroyd's seat, *Sheffield Place*, is situated in the most agreeable part of the neighbouring country: the park is fine, forming varied lawns well wooded, shelving into winding vales, and commanding very noble sweeps of richly cultivated country. One vale takes an irregular

146 THE FARMER'S TOUR

There is great public utility in a gentleman who undertakes the office of a justice of the peace, attending minutely to these parts of the business. The abuses of the parish officers call out for a remedy as much as any other; and a neighbourhood is not a little

course through the park and grounds; the boundaries of which are well contrasted. In some places thick woods of oak hang to the bottom; in others copses, inclosures, and scattered trees; in one spot the hills rise in a bold manner, intermixed with rocks and pendent woods. A small river takes its course through the vale, which is formed into two lakes, one of them at the foot of the romantic ground above-mentioned; the other partly environed by a large wood, which on one side is thick to the very water's edge; but on the other, the underwood against the water is cleared away, and the land converted to lawn, but the trees left in it, which forms a most agreeable retired scene, backed by the thick wood. The lawn breaks away among the woods, and rises to the house, which stands on higher ground. This winding vale, so rich in wood, water, and hanging sides of hills, is seen to great advantage from a seat in the park, from whence the view is truly picturesque. Near the house is a wood of 60 acres, full of very fine timber, and cut into agreeable walks, one of which, that winds by the side of the river in a sequestered part of the valley, is beautiful.

THROUGH ENGLAND. 147

little obliged to those spirited, active gentlemen, who will execute this office with vigour, in remedying such real evils.

The following are the particulars of Mr. *Holroyd's* farm.

836 Acres in all	500 Sheep
450 Grass	12 Cows
66 Arable	48 Beasts
306 Wood	6 Horses
14 Water	8 Draught oxen.

Farms, through this country, about *Sheffield Place*, rise from 40*l.* to 130*l.* a year; the soil is mostly heavy; much of it stiff clay; lets at an average at 10*s.* an acre, but woods not more than 5 or 6. Their course of crops;

1. Fallow, limed or dunged
2. Wheat
3. Oats or barley
4. Clover and ray-grass 1 year
5. Wheat

Very few turnips.

They plough four times for wheat; sow 3 bushels, and get 3 quarters *per* acre; but 7 have been gained. For barley they plough three times; sow from 4 to 6 bushels *per* acre, sometimes 7; and on the

148 THE FARMER'S TOUR

south downs even to 8. The crop in the wild is 4 quarters, but on the hills 6 or 7. They stir but once for oats; sow 5 or 6 bushels an acre; the crop to 6 quarters; 3 $\frac{1}{2}$ the average. For pease they stir three times; sow 4 bushels an acre broad-cast; sometimes in every other furrow: the crop 3 quarters an acre: they have scarce any beans.

The few turnips they have, they plough three or four times for; hand-hoe them twice, and eat them on the land with sheep; some of them feed beasts with them.

They have both winter and summer tares, but most of the latter: sow them on a wheat stubble for soiling horses in the stable; 1 acre will keep 6 horses 5 weeks, if the crop is good.

They have a little buck-wheat, which they also sow after wheat; the crops about 4 quarters an acre; use it for fattening hogs, for pigeons, poultry, &c.

There have been some improvements of waste land in this country. Some small tracts from *Chelwood* common and *Ashdown* forest have been converted to profit. The soil a black moory sand upon loam; the spon-

spontaneous growth ling (here called heath) and wild grafs. Their method has been to pare and burn it in *May*, and then plough three or four times for wheat; of which they get as good crops as on the best land. After wheat they sow oats, and get 4 or 5 quarters an acre; with the oats clover, which they mow for hay; and succeed that by wheat again. Sometimes they sow turnips on the paring and burning. The rent, even inclosed, is very low; much at 2 s. an acre; some 2 s. 6 d.

Respecting manures, few farmers in this part of the wild have sheep enough to fold; but on the hills they all fold from *May* to *Michaelmas*.

Paring and burning is done at the expence of 1 l. 1 s. *per* acre.

They lime all sorts of soils; lay on 4 or 5 loads an acre; 30 bushels each, at 10 s. a load, besides carriage; it lasts 3 crops, the wheat, oats, and clover.

Marle is not much used, though more at present than formerly: but there are abundance of old marle pits about the country, with trees an hundred years old in them; which shews that marling was once prac-

150 THE FARMER'S TOUR

tified more in this country than it is at present. They lay on 300 loads an acre; each 20 bushels; but it does not last above 7 or 8 years.

They chop their stubbles, and cart them to the farm yard for litter; and also fern for the same use; but their hay they stack about the fields; and their barns are all scattered about the farms.

Pigeons dung they sow on their meadows, and find great use in it.

Most of their good grass is mown; they have but little dairying; they fatten a few beasts and sheep. The breed of cattle is their own *Sussex* short-horned; seldom rise to more than 120 stone (8 lb.) In rearing calves, they have the peculiar method of letting them run with the cows 9 or 10 weeks; thus sacrificing the whole milk of a cow to rearing one calf; whereas in the north they rear oxen that come to 100 stone (14 lb.) with flet or blue milk only. Four gallons of milk is about the quantity given by a good cow; the winter food straw and hay.

Their swine fatten to 60 stone (8 lb.) Mr. *Darwes*, one of Mr. *Holroyd's* tenants, fattened one to 86 stone, clear weight.

THROUGH ENGLAND. 151

The chief sheep management here, is wintering flocks for the down farmers, for which they receive 2*s.* 6*d.* a head. Those who purchase any for themselves, buy in wether lambs about *July*, at 5*s.* 6*d.* to 7*s.* 6*d.* a head; keep them a year and quarter; and sell them fat at 16*s.* or 17*s.* and get 2*s.* more by the wool. In summer they fold them a little. Some farmers buy *Dorset* ewes in *October*, at 20*s.* which lamb before *Christmas*; they sell the lambs fat in *July*, at 20*s.* and then fatten the ewe, which they sell at 18*s.* to 20*s.* They give their own flocks a few turnips, but the wintered ones have only the stubbles. The south down sheep clip about 2 or 3 *lb.* a fleece.

In their tillage they reckon 4 horses and 10 oxen necessary for 150 acres of arable land; they use 8 oxen in a team or 4 horses.

No real necessity is implied in such drafts, when in the hands of farmers who, in these matters, are so extremely ignorant. They have here a great antipathy to turnpikes. One of them who lives where there are none, assured Mr. *Holroyd*; that they destroyed the cart tackle, and shook the carriages to pieces; expressing his satisfaction at living

152 THE FARMER'S TOUR

where there are none, but in such roads that the bed of the waggon drags on the ground; observing *that* did not wear either the wheels or the carriage.

I was informed, that oxen have been used here, one before another, in harness.

A team does an acre a day, sometimes one and a quarter; the depth from three to five inches, and the price from 6s. to 8s.

In the winter feeding their teams, they reckon that a horse eats more hay than an ox, if constantly worked; but they keep the latter on straw, when not worked. Horses they think most profitable on wet land, because they go in a row; but oxen on light soils. They never cut straw into chaff; they use both turnwrest and foot ploughs.

In the hiring farms, they reckon five rents necessary to stock,

Land sells at from 28 to 30 years purchase; tythes are compounded in the lump; meadow lands in some parishes pay a modus of 1d. $\frac{1}{2}$ or 2d. an acre. Poor-rates run very high, from 2s. 6d. in the pound to 9s. rack rent, which it is at

Cbailey.

Chailey. I enquired particularly into the reason of this enormous height, and they told me it was wholly owing to a plenty of commons, which encouraged the poor to such idleness, as to bring vast numbers to the parish.

In a letter I have since been favoured with from Mr. *Holroyd*, he writes as follows: "There are five commons in this parish, two of which are considerable, If we had none, the poor-rates would be very trifling. The great commons in the neighbouring parish of *Chailey* are the principal cause of the extravagant assessments for the poor, viz. 9s. in the pound of rack rents. In general, I believe, you will find they furnish most of the chargeable poor." What will those ignorant prejudiced men say to this, who plead against inclosing commons! How fine it is for a poor man to keep a cow! say they. But give a poor man two or three cows, you give him a dependance on something else besides industrious labour, which makes him idle: an accident happens to his cows, and then he betakes himself, not from idleness to work, but to the

2

parish,

154 THE FARMER'S TOUR

parish.—They have no manufacture in this country for employing the women and children, but all drink tea.

There are not many leafes here.

The farmers carry their corn 10 miles.

LABOUR.

In harvest, 1s. 6d.

In hay-time, 1s. 4d.

In winter, 1s. 2d.

Reaping, 7s.

Mowing corn, 1s. 6d.

———grafs, 2s.

Hoeing turnips, 7s. 6d. the first, 3s. the second.

Headman's wages, 8l. 8s.

The next, 7l. 7s.

Lad's, 2l. to 5l.

Maid's, 3l. 3s.

PROVISIONS.

Bread, 1d. $\frac{1}{2}$ per lb.

Cheefe, 4

Butter, 6

Beef, 3 $\frac{1}{2}$

Mutton, 3 $\frac{1}{2}$

Veal, 3 $\frac{1}{2}$

Pork,

THROUGH ENGLAND. 153

Pork, 3 *d.*
 Milk, $\frac{1}{2}$ per pint.
 Potatoes, 8 a peck.
 Labourer's house-rent, 30s. to 3l.
 ——— Firing, 3l.

The following are the particulars of a farm.

318 Acres in all	25 Oats
64 Wood	25 Clover
106 Grass	20 Fallow
146 Arable	6 Pease
2 Hops	4 Turnips
140l. Rent	6 Tares
6 Horses	2 Men
12 Oxen	1 Boy
6 Cows	2 Maids
60 Acres wheat	6 Labourers.

The following are the particulars of the parish of *Fletching*.

2700l. Rent	1272 Souls
108 Farms	250l. Tythes, but
50 Acres of hops	none for wood.
208 Families	

At *Newick*, near *Sheffield-Place*, Mr. *Vernon* has two acres and a half of lucerne in rows equally distant, two feet: he cuts it three times every season, and it maintains

156 THE FARMER'S TOUR

maintains five horses *per* acre; he keeps it perfectly clean, in which state I viewed it. It is dug twice every year in the intervals, and the rows cleaned with *Lawson's* scrape-all, an instrument recommended by *Mr. Harte*, in his *Essays on Husbandry*, who gives a plate of it. The expence of cleaning 30s. an acre. Suppose the whole expence *per* acre as follows.

Cleaning and digging,	-	£. 1	10	0
Rent,	-	1	0	0
Tythe and town charges,	-	0	7	0
Reaping thrice,	-	0	12	0
Loading and carting ditto,	-	0	6	0
Total,	=	3	15	0

Produce.

Keeping five horses from beginning of *May* to middle of *October*, at 2s. 6d. *per* horse *per* week,

-	-	14	7	6
Expences,	-	3	15	0

Clear profit,	=	10	12	6
---------------	---	----	----	---

Which

THROUGH ENGLAND. 157

Which shews clearly, that this plantation is a fresh instance of the great profit of lucerne. Mr. *Vernon* has built a very complete farm-yard, with open sheds, &c. around it, and excellent conveniences for swine. Remarking in this yard, that there were no racks nor mangers for hay under the sheds, I enquired the reason, and was told, that if their straw was given under cover, they would not eat it, if there was any to be had in the area of the yard, exposed to the weather, which is the most extraordinary assertion I remember to have heard. At this rate, the beasts should in dry weather have their straw dipped in a horse-pond, to engage them to eat it; but the idea is certainly erroneous, or a beast in *Sussex* is different from beasts elsewhere: for I have in twenty yards seen the farmers at the expence of hovels with large mangers in them, for feeding straw, and at the same time cribs about the yard; and in wet or bad weather they all endeavour to feed under cover: it has been always the case in my own yard. Perhaps the notion came from this: the thrashers, who give the cattle the straw as they clear it, take

158 THE FARMER'S TOUR

take care to move the cribs near the barn-door, for the greater convenience of filling them, and for once that they carry straw a distance to the shed, they will put it into the cribs ten times. This I know is the case with my thrashers, unless well attended to: then it is no wonder the cattle prefer one to the other. But why do cattle thrive best housed all the winter, if it is so much better to eat their straw in the wet?

From *Lewes* to *Brightelmstone* is a line of downs, much of which lets at 2s. 6d. to 5s. an acre; the farms are all large, and many of the farmers very rich. From the latter place to *Steyning*, it is the same.*

From *Steyning* to *Arundel* is also down; about *Findon* their husbandry is as follows,
and

* This road commands to the right, at one spot, a most amazing view of the lower country: you look down the steep of hill into the wild, quite in another region beneath you: a vast range of many miles of inclosures are seen on the flat, quite rich in verdure and wood. It is walled in by the sweeps of bare hill, projecting in the boldest manner: a view uncommonly striking.

THROUGH ENGLAND. 159

and I may remark, nearly the same over all the downs I have passed.

Farms rise to 500*l.* a year; there are but few small ones; the rents are 13*s.* or 14*s.* for the inclosed land, and the downs into the bargain. Their course of crops,

- | | |
|----------------------|-------------------|
| 1. Turnips | and trefoile, two |
| 2. Barley | years |
| 3. Clover, ray-grafs | 4. Wheat. |

Turnips are worth from 20*s.* to 3*l.* average 25*s.* to 30*s.*; barley four or five quarters *per* acre; clover they mow once, and get two loads an acre; wheat three quarters *per* acre.

Their flocks of sheep rise to 1800, some not more than 2 or 300: they stock the down at the rate of three to an acre in summer, but feed in winter on turnips and hay: their management is to sell every year a certain number of old ewes and old wethers, generally a fourth of the whole flock of each: they value their lambs on an average at 8*s.* and the ewe's and lamb's wool at 3*s.* they fold the whole year, except at lambing; in summer for wheat on the clover lays, and in winter for

166 THE FARMER'S TOUR

for turnips. Ten herdles square of six feet each will fold 300, one night in a place; consequently they fold 300 sheep in 400 square yards. An ewe fold they reckon better than a wether one, as three to two.

Particulars of a farm.

600 Acres	7 Men
300 Arable	2 Boys
300 Down	2 Maids
200 <i>l.</i> Rent	5 Labourers
900 Sheep	60 Acres wheat
10 Horses	60 Barley
16 Draft oxen	120 Clover
5 Cows	60 Turnips. *

For

* In my way from *Findon* to *Arundel* I very fortunately lost my road on the downs, and went round by *Houghton-bridge*; I say fortunately, from its leading me along the down edge, with noble views over the wild, at one spot in particular, where the road leads very near the precipice, the slope of the hill is so steep, that a boy could not crawl it, and so high, that the immense country open to you, is seen below, that almost every enclosure is distinct, in a vale ten miles long by three broad.

A bold

For the following account of the husbandry about *Walberton*, I am indebted to *Richard Nash*, Esq. of that place.

Farms rise from 50*l.* to 400*l.* a year, in general 100*l.* the soil a very fine rich loam, on clay or marle, and lets for 20*s.* an acre. There is an exceeding fine tract of this rich land, which extends from *Shoreham* quite to *Chichester*, a line of 25 miles; and it is on an average five miles broad.

Their course of crops,

- | | |
|---------------------|------------|
| 1. Clover, one year | 3. Barley. |
| 2. Wheat | |
-

A bold wave of the hill to the right and left forms a dell at your feet at the foot of the down; a thick clump of wood fills it, and forms a romantic scene. The wave of hill to the left is as bold a swell, fringed with wood, as ever seen; groves that skirt the fields break from it, and diversify the view: a farm with stacks, and a large water under the shade of a noble wood, form a complete picture: other woods, spreading about the vale, are broken by innumerable enclosures, on all which you look down in the boldest manner. To the right, the down hills bear away one beyond another, forming very striking projections. The whole scene glorious!

162 THE FARMER'S TOUR

Turnips are in but small quantities ;
with them the course is,

1. Turnips 3. Wheat.

2. Oats

Another :

1. Fallow

5. Wheat

2. Wheat

6. Barley

3. Barley

7. Pease

4. Clover

8. Wheat.

Both which courses are very bad. Why not, 1. Turnips ; 2. Oats or barley ; 3. Clover ; 4. Wheat ? Their own shews plainly, that this would be an excellent one for their soil.

For wheat they plough but once, unless the second crop of clover is turned in as a manure, which they reckon the best husbandry : in that case they stir twice. The clover is fed first in the spring, then mown for hay, and the second growth ploughed in. Sow three bushels an acre, the crop four quarters. A common piece of husbandry here is to plough in turnips for wheat, and find it to answer greatly : they also sow wheat after feeding turnips. Mr. Nash has many times known five quarters *per* acre gained so : buck-wheat also is some-
times

times sown to plough in. For barley, they plough four or five times, sow five bushels and a half an acre, and reap four quarters.

They sow very few oats.

For pease they give but one ploughing, as they are generally sown on lays.

For turnips they stir four times, hand-hoe them once, and feed all with sheep on the land; their clover at one mowing yields two loads an acre of hay; the best wheat follows that which is ploughed in.

On the hills they sow sainfoine, but none in the low rich lands.

Respecting manures, they use a good deal of marle, of a white or yellowish colour; they lay on 40 loads (30 bushels) *per* acre, and find that it lasts 20 years.

No draining is commonly practised; but Mr. *Nash* has done some hollow ones, which answer greatly: he filled with stone.

Good grass lands are applied to the fatting of oxen; *Welch* runts are mostly bought, one of which they allot *per* acre; but in the meadows down by the sea, which they call brooks, they have

164 THE FARMER'S TOUR

very fine cattle. The method here followed is to buy in *October*, at about 6*l.* each, and they sell in eleven months after at 9*l.*

Their swine fatten to 30 stone, (8*lb.*) They have no regular flocks of sheep, and the number in the country is not considerable: their idea of the rot is, that certain herbs, which grow in low places, give them that distemper.

In their tillage they reckon six horses necessary to one hundred acres of arable land: they use three or four in a plough, and do an acre or an acre and a quarter in a day, four or five inches deep: the price 6*s.* an acre. No straw cut into chaff. They break up their stubbles for a fallow after wheat sowing; they use only single wheel ploughs. In the hiring farms, they reckon 1500*l.* necessary for one of 400*l.* a year. Land sells at 32 years purchase; tythes are gathered in kind; land-tax at 4*s.* is 1*s.* 9*d.*; poor rates 1*s.* 6*d.* in the pound, 20 years ago 9*d.* They have no employment from manufactures; but all drink tea twice, and some thrice a day.

Most

THROUGH ENGLAND. 165

Most of the farmers have leases; they carry corn four miles.

LABOUR.

In harvest, 45s. to 50s. a month, and board.

In hay-time, 1s. 6d. and beer.

In winter, 1s. 2d.

Reaping, 9s.

Mowing, cocking, and turning corn, 2s. 6d.

Ditto grafs, 2s.

Hoeing turnips, 5s.

Thrashing wheat, 3d. and 4d. *per* bushel.

———— Barley, 1s. 2d. *per* quarter.

———— Pease, 1s. 6d.

Head-man's wages, 9l. to 10l.

Lad's, 3l.

Maid's, 3l.

PROVISIONS.

Bread, 2d.

Cheese, 4

Butter, 8

Beef, 4

Mutton, 4

Veal, 4

Pork, 3 $\frac{1}{2}$

M 3

166 THE FARMER'S TOUR

Bacon, 5d. $\frac{1}{2}$

Labourer's house-rent, 2l.

———— Firing, 2l.

The particulars of a farm.

550 Acres in all	70 Barley
350 Arable	70 Oats
200 Grass	10 Pease
24 Horses	20 Turnips
350 Sheep	60 Clover
100 Swine	50 Fallow
50 Fatting —	20 Labourers.
70 Wheat	

From *Walberton* I took the road to *Bignor* park, the seat of *Nicholas Turner, Esq.* The following particulars of his husbandry will shew the most improved methods of his neighbourhood.

The courses,

1. Summer fallow.
2. Wheat.
3. Beans drilled; two rows at one foot, on six-feet ridges, hoed.
4. Wheat.
5. Oats.
6. Clover and ray-grass, two or three years.
7. Wheat.

Another;

1. Fallow
2. Wheat
3. Beans or pease in drills, and turnips
between them
4. Wheat
5. Oats
6. Clover, &c. 3 years
7. Wheat.

He gives 4 earths for wheat; sows 2 bushels an acre; and gets from 3 to 4 quarters in return. For beans he ploughs but once; drills them by hand in the furrows, 4 bushels *per* acre; he hand-hoes once; the crops from 4 to 7 quarters; average 5. The bean stubble is ploughed but once for wheat, which crop thus often proves better than after a fallow.

For oats he sows but once; sows 4 bushels an acre; the crop from 5 to 10 quarters; average 6. Clover he mows once for hay; gets $1\frac{1}{2}$ load an acre, and then seeds it; in which case he ploughs up for oats; but much of his clover he feeds with hogs: Nine acres by that application alone, paid him 50*l.*: the middle of *April* he buys sows that pig in *May*; they are turned

into the clover directly, and neither they nor their pigs have any thing besides; they are kept in the clover through the summer. This is very extraordinary; clover is known in several parts of the kingdom to be an excellent food for half, three fourths, or full grown hogs; but even in those places they have a strong opinion that it is pernicious to young pigs. But Mr. *Turner* gave me another instance besides his own; it is of a farmer, *William Boniface* at *Ford*, who makes more than 70*l.* a year by swine in clover; his sows pig in the clover field, and have nothing else to eat; some pigs die, but not many; and the practice he finds in general to be highly profitable.

Burning earth for manure, Mr. *Turner* finds a very beneficial practice; he pares an inch thick, and burns all rubbish places; under trees, borders, low swamps, &c. which his men perform for 1*s.* the 40 bushels: and as soon as the places get something of a turf, he burns them again. I saw several large heaps of the ashes, and from their appearance, should suppose them a very rich manure. He lays on 20 loads an

THROUGH ENGLAND. 169

an acre ; chiefly on to clover and grafs ; the dressing laſts good ſix years.

Whins (furze) this gentleman has cultivated in large quantities, and they turn out very profitable for faggots ; they pay him 5*l.* an acre, in 3 years.

Moſt of Mr. *Turner's* land is a ſtiff clay : I mentioned hollow draining to him, but he aſſured me it was of no ſort of uſe, and directly carried me to a field drained 12 years ago, at the expence of 30*l.* ; the drains well cut and filled with ſtones ; and yet the land to this day as wet as ever : the clay is ſo retentive, that water ſtands over the drains, and all around them without ever getting into them : not a ſhilling benefit has been found from them. The only method of draining he finds of uſe, is the open ones, to take the water that runs on the ſurface ; and for the making which he bought Mr. *Knowles's* drain plough.

This gentleman's meadow land is very rich ; worth a guinea an acre : he mows from 2 to 3 loads of hay an acre. He ſuckles his cows, which pays him 5*l.* a head.

Lucerne

Lucerne he tried in drills, and kept it perfectly clean; the crop he made into hay, but the dust of the intervals stuck to it so, that it did his cattle much mischief.

His tillage he performs with 6 oxen or 4 horses, the latter at length. But he has in some works used oxen single, each in a separate yoke.

An extreme useful invention is that of a yoke of varying length for harrowing, so that the beasts may always walk in the furrows, whatever breadth the ridges are of. Plate XXIV. Fig. 1. represents it.

A machine which he finds extremely useful is a cutting roller, which he uses instead of a spiky one; the latter proved ineffectual. Plate XXIV. Fig. 2.

From 1 to 2 6 feet 6 inches.
3 to 4 1 8

The trough 10 inches deep; diameter of the cutting wheels 20 inches.

The central cylinder is 6 inches diameter.

The blocks turning on it, 2 inches diameter.

The iron cutting edges are cast, and cost 3s. 6d. each.

There

THROUGH ENGLAND. 171

There are hollow wheels to enclose the cutting ones, on which they move it from field to field.

It is drawn with 4 horses, and cost 4*l*.

Mr. *Turner* uses a large twitch harrow, invented by *Thomas Marshal* of *Godalming* in *Surry*, with success; the peculiarity of it is to free itself from the twitch, &c. by dropping a thin board through which the teeth are let,

He has likewise, himself, invented a turnwrest plough, that works without taking on or off the wrest.

He has various sorts of spiky rollers, but prefers the cutting one to all.

Knowles's drain plough he has used with great success, and likewise a small one he has made from it; the proportions the same, but it cuts a smaller drain.

The particulars of this gentleman's farm are as follow.

300 Acres in all	12 Barley
115 Arable	13 Beans
185 Grass	6 Pease
£. 150 Rent	6 Turnips
30 Wheat	12 Fallow
30 Oats	10 Cows

172 THE FARMER'S TOUR

12 Draught oxen	45 Swine
4 Horses	100 Sheep
2 Brood mares	5 Labourers.

About *Sutton* the farmers sow oats, the stubble of which they plough up at *Michaelmas* on to a narrow sharp ridge. In the spring they make the land quite fine, and sow turnips in *April* or *May*; they get very large ones; but plough in the whole crop as a manure for wheat, and harrow in the seed on one earth; in this manner they very often get 5 quarters an acre.

Around *Chicbester* there is a fine tract of rich land; a mile or two about the town even the arable lets from 20s. to 45s. an acre; the grass from 1l. 7s. to 4l.; but they have many watered meadows; they mow much for hay, that yields 3 tons an acre at one cutting; but many inclosures are applied to fatten oxen; an acre will more than fat an ox; the sort is, in general, *Welsh* runts, from 80 to 90 stone (8lb.)

Mr. *Nott*, a butcher at this place, bred a long-horned beast, which he has now sold for 50 guineas.

The course in their arable lands is;

THROUGH ENGLAND. 173

- | | |
|-------------------|-----------|
| 1. Fallow | 4. Clover |
| 2. Wheat | 5. Wheat. |
| 3. Barley or oats | |

The crops are ;

Wheat 4 quarters.

Barley 4 $\frac{1}{2}$.

Pease 3 $\frac{1}{4}$.

Oats 6, up to 10.

The manure made about *Chichester* sells at 4*s.* or 5*s.* a load. Many farmers use sea weed; but not all that can, though much is not taken.

Some sainfoine has been tried near the town: there are 40 or 50 acres of a thin gravelly soil, on which it answers extremely. The duke of *Richmond* and lord *George Lenox* have tried it with great success.

Robert Bull, Esq. of *Chichester*, has a grafs farm near the town, which he keeps in the most gardenlike order. His hedges are all quick, and regularly sheared; his gates excellent; his lands levelled, and richly manured. Chalk he has tried, and found it to answer well; it makes a fine growth. Six acres of this farm were a furze cover, which Mr. *Bull* grubbed clean, at the expence of 23*l.* and has by good manage-

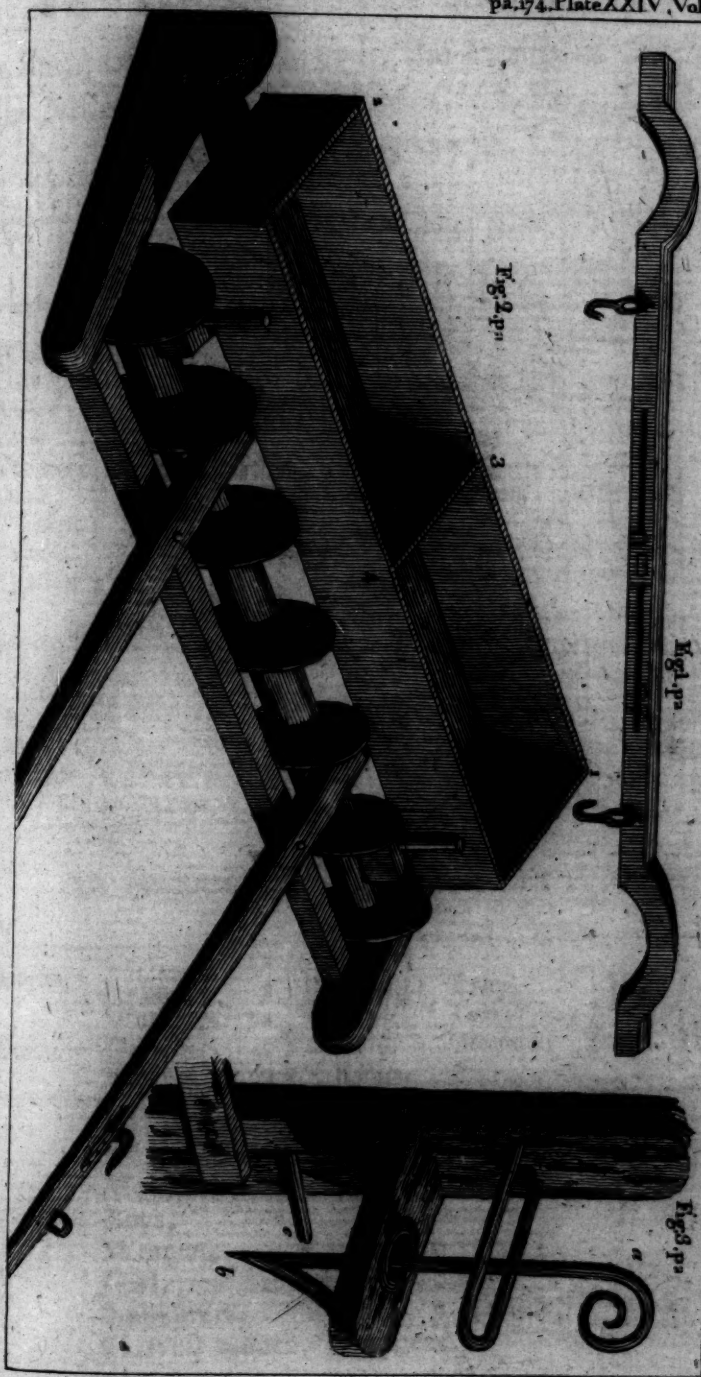
174 THE FARMER'S TOUR

management brought it to excellent grass. His crops of hay are on an average 37 *C. wt.* per acre.

Plate XXIV. Fig. 3. shews a pretty contrivance of a fastening for his gates.

(a) Being drawn from the post raises (b) and lets out (c), the iron peg fastened to the gate.

The following are the particulars of a farm, belonging to this gentleman, 6 miles from *Chichester*: it is to be regretted that all landlords do not keep similar accounts, instead of the single one of acres which they find in their survey books.





THROUGH ENGLAND. 175

The State of *Easton* Farm in the Parish of *Siddlestham*,
six Miles to the South of *Chichester*, for the
present Year, 1770.

	No. of Plough- ings.	Computed acres 6 score.	Seed.		Produce.		No. of	Average rate.	Value.	
			Bush.	Pecks.	Load.	Quart.			l.	s.
Wheat	3	148	2	1	—	—	74	8	592	—
Oats	1	92	—	—	—	3	276	— 12	165	12
Barley	3	8	—	—	—	3	24	— 16	19	4
Pease	3	26	—	—	—	13	—	6	78	0
Vetches	3	28	—	—	—	14	—	6	84	0
Grass	54	—	—	—	—	—	—	per acre, 20	54	0
Turnips	4	—	—	—	—	—	—	—	—	—
* Seeds	—	39	—	—	—	—	—	per acre, 20	39	0
* Fallow	3	33 $\frac{1}{2}$	—	—	—	—	—	—	—	—
		428 $\frac{1}{2}$							Total value,	1031 16
coppice in hand,		8							Present rent,	200 0
the whole farm,		436 $\frac{1}{2}$							Taxes, expences,	300 0
										500 0
For the		Clover, 39							Profit,	531 16
wheat lain		Vetches, 54								1031 16
next year.		Fallow, 33 $\frac{1}{2}$								
		Acres, 126 $\frac{1}{2}$								

An Account of the Stock on the Farm.

Horses.	Cart,	12	} 14	Cows,	12
	Riding,	2		Sheep.	Ewes, 100
Oxen.	Working,	12	} 16	Lambs and	} 150
	Growing,	4		Wethers,	
	Fatting,	0		Hogs,	40

Servants kept on the Farm.

Men, at	—	£.8	0 a year,	5
Boys,	—	3	0	5
Women,	—	3	0	2
Girl,	—	1	10 s.	1
Labourers,	—	0	7 a week,	5
Harvest month, 2 guineas.				

176 THE FARMER'S TOUR

A waggon,	6 wheels,	£. 36 0
	4 ditto,	25 0
A dung cart,	6 wheels,	9 0
	4 ditto,	7 0
A pair of harrows,	-	0 14
A corn roller,	-	2 10

No. of horses to a plough in general, 4
 They stir with this 2 acres a day.
 Plough from whole ground $1\frac{1}{2}$.

Seed sown, not mentioned in the Account.

Wheat,	-	-	2 bushels.
Oats,	-	-	4
Barley,	-	-	3
Pease,	-	-	3
Vetches,	-	-	$1\frac{1}{2}$
Turnips,	-	-	1 lb. $\frac{1}{2}$
Seeds,	-	-	$1\frac{1}{2}$ gallon.

Thrashing wheat,	-	1 quarter, at	s. d.
oats,	-	2	2 0
barley,	-	1	0 9
pease,	-	1	1 4

	s. d.
Reaping and binding,	5 0 an acre.
Mowing and cocking Lent corn,	1 6
Mowing grass,	1 6
Hacking pease,	1 6
Ploughing 3 times, at an average,	4 0
Harrowing with 3 horses, (2 times)	0 9 an acre, 10 acres a day.

	A day.		A day.
Weeding,	6 d.	Picking stones,	6 d.
Haying,	6	Turnip hoeing,	6
Harvesting,	10		

	s.
Labourer's house-rent,	40 a year.
firing,	24

From *Chichester*, which is a neat well built town, the country is all flat, and rather light to *Havant*: about that place land lets from 15s. to 25s. an acre. Their courses;

- | | |
|-----------|------------|
| 1. Wheat | 3. Clover. |
| 2. Barley | |

Also,

- | | |
|-------------------|-----------|
| 1. Fallow | 4. Clover |
| 2. Wheat | 5. Wheat. |
| 3. Barley or oats | |

Wheat yields 3 quarters *per* acre; barley 4 or 5. They have but few pease or turnips, and no beans. Chalk is a principal manure with them.

Farms rise to 300*l.* or 400*l.* a year; in general 100*l.* to 160*l.*

About *Portsmouth* the lands are very rich, with large gardens; from the vast quantities of manure to be had there.— After viewing the dock yards, &c. at present but a melancholy walk, I took boat for the isle of *Wight*, where I expected much entertainment in excellent husbandry.

You must here allow me to conclude.

LETTER XXIV.

I Landed at *Ride*; the coast a fine dry one, where cultivation rises immediately from the water. Making enquiries concerning the husbandry, I found it as follows in this neighbourhood.

The soil is in general a good loam, more inclinable to sand than clay; but some fields are quite clay: the rent on an average 20s. an acre. The course of crops;

1. Summer fallow.
2. Wheat.
3. Barley or oats.
4. Clover and ray-grass, one year, which they dung as soon as the spring corn is off.

5. Wheat.

Another:

- | | |
|-------------------|--------------------|
| 1. Turnips | 4. Wheat |
| 2. Barley | 5. Barley or oats. |
| 3. Clover and ray | |

For wheat they plough after clover but once, but a fallow three or four times,

fow

THROUGH ENGLAND. 179

sow two or two bushels and a half an acre, and get four quarters on an average, very often five: for barley they give three earths, sow four bushels an acre, and reckon the mean crop five quarters and a half: for oats they stir but once, sow five bushels an acre, the crop six quarters.

They plant beans on their stiff lands dunged; but, what is vile husbandry, while they are at the expence of setting, they do it promiscuously, and quite thick; they plant two bushels and a half an acre, and pay the women 2s. 4d. a bushel for it; they do not hand-hoe: this is a whole system of absurdity; for that money they might have them set minutely accurate in rows, save much seed, and admit good horse and hand-hoeing, like the farmers in *Kent*. The goodness of their land, however, gives them better crops than they deserve: they get five quarters an acre.

For turnips they plough four times, hoe once, and harrow once; some hoe twice; they feed all off with sheep; the value 3*l.* an acre. Clover they mow twice; the first for hay, of which they get a load and a half an acre, and the second for seed.

180 THE FARMER'S TOUR

As to manuring, they use much chalk, a hard sort; lay 30 waggon loads, each 40 bushels, *per* acre, and they reckon that it lasts 12 years; they fetch it 5 miles; but go twice a day; the carriage is 6s. a load, and the price 1s.: it does best on stiff land; but they have a general idea, that if land has been once chalked, it will not bear it well a second time.

They fold their sheep both in winter and summer; and on wheat after it is up.

They used to lay large quantities of lime on their land, but have now left it off: after liming they say the land won't take chalk.

Some few among them chop their stubbles for litter. Their hay they all feed at home.

Sea weed they bring into the farm-yard, and mix it with the dung to carry on to the bean land; without mixing, they say it won't do: if carried on alone it breeds couch—that is to say, its strength forces the roots to vegetate uncommonly.

They have one itinerant labourer that does under-ground draining; he goes about from farm to farm, to see who wants

to have any done; they are filled with chalk stones; and the improvement is always very great.

Their best grafs they mow in general for hay, but most of the farmers keep dairies, 10 or 12 cows in each. An acre and half of grafs will summer feed a cow. The daily quantity of milk, from 4 to 6 gallons, some few 7; but not more butter than those that give less. There are scarcely any dairies here without *Alderney* cows, which are generally liked; many of them will give 7 or 8 *lb.* of butter *per* week.

Most dairies are let; the price 3*l.* 10*s.* or 3*l.* 15*s.*; but he that hires finds most of the firing. A dairy-maid will take care of from 8 to 14. The winter food till calving is straw, and then hay.

There are very few flocks of sheep here large enough for folding; but within 3 miles is one of 700. Wethers are kept by some merely for folding.

In their tillage they reckon 6 horses necessary for 100 acres of arable land; they use 4 in a plough, and do an acre a day; in barley sowing 2; the price 6*s.* Some few farmers cut straw into chaff. They break

182 THE FARMER'S TOUR

up their stubbles for a fallow as soon as wheat seed is over. Wheel ploughs are only used.

Poor rates 2 s. 6 d. to 3 s. 8 d. in the pound. The poor have no employment from manufactures.

The particulars of a farm.

100 Acres, all	10 Summer fallow
arable	6 Turnips
£. 100 Rent	6 Horses
50 Wheat	2 Cows
20 Oats	1 Man
14 Beans	2 Labourers,

Another :

80 Acres in all	5 Horses
£. 60 Rent	8 Cows
20 Acres Wheat	20 Swine
10 Oats	1 Man
10 Beans	1 Boy
20 Fallow	1 Labourer.
20 Clover	

At *Newport* I had the satisfaction of conversing with Mr. *Knowles* the wheelwright, well known for being the inventor of an excellent draining plough, for which he had a premium from the *London* society. In the making a common plough, he explained

THROUGH ENGLAND. 183

plained to me his ideas of the method of constructing one in a perfect manner. Among other circumstances he mentioned the following.

He does not conceive that it is proper for the line from the point of the share to the junction of the rein with the beam, to form a segment of a circle; on the contrary, that it should make a slight angle, nearly at the centre, between the two.

He attends particularly to making the mould-board thinner in the bosom, against which, the earth at first forces.

Respecting the breadth of the tail of the plough, that of the share is not his rule, but nearly the breadth the farmer approves for his furrow—generally 11 inches, although the share is but from 5 to 7 inches.

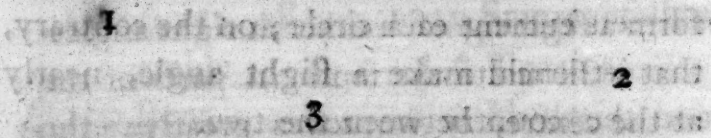
The share he makes of one iron, from point quite to the heel of the plough, and *quite straight*, not inclining towards the land at heel.

The mould-board he cuts off at the tail, so that it can hang but little over the land.

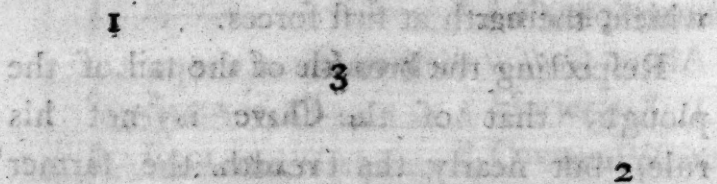
In the construction of all ploughs, he thinks that the line of draught should direct

184 THE FARMER'S TOUR

the height of the wheels; so that if 1 is the horses shoulders, and 2 the heel of the plough; 3 should be the junction of the traces and the carriage, forming a slight angle, that the draft may be rather upwards; it being in draft much better rather to draw upwards than downwards:



A straight line will do well, but the common error is reversing it, thus;



Mr. Knowles has invented a turnwrest plough, with intention to remedy the defects of the common *Kentish* one. Plate XXV. Fig. 1. is a representation of it.

13 A screw which fixes the beam to a point; nipping it to the iron (16) on which it turns; swinging on the pivot (3).

(15) The sheath on which the share is fixed.

A. Is the bottom of the plough.

The price, 4*l*.

His draining plough, 7*l*.

The

The common ditto, 4/.

And he has also invented a wheel to answer the purpose of a perambulator; the price 1/. 11s. 6d. Likewise a machine for facilitating the taking angles in surveying land.

Newport is a very regularly built town, the streets cutting each other at right angles.

From thence to the southern parts of the island the country improves greatly; the hills are bolder, and the vales exhibit a finer variety of landscape. The whole country pleasing.

About *Godfall* their course of crops is;

- | | |
|-----------|------------------|
| 1. Fallow | 4. Clover 1 year |
| 2. Wheat | 5. Wheat. |
| 3. Barley | |

Another:

- | | |
|------------|-----------|
| 1. Turnips | 5. Barley |
| 2. Barley | 6. Clover |
| 3. Clover | 7. Wheat. |
| 4. Wheat | |

Wheat yields from 3 to 5 quarters.

Barley, from 4 to 7.

Oats, 6 to 10.

Pease, 3.

They hoe their turnips but once. They mow their clover once for hay, and get 2 or 3 loads an acre; and then for seed.

186 THE FARMER'S TOUR

They used to lime their lands much; but like the farmers about *Ride*, have changed it for chalk, of which they lay 20 loads an acre.

In their tillage they assert that 10 horses are necessary for 200 acres of arable land; use 2, 3, but generally 4 in a plough; 8 sometimes, and do an acre a day; in barley season 2. The price 5s. an acre; some land up to 8s. Wheel ploughs only used.

Farms 200l. or 300l. a year.

Flocks rise to 1200; they reckon the profit in lamb and wool.

Lamb fat, 16s. to 20s.

Wool, 2s.

They keep the same stock regularly, except when they change the breed of the whole.

About Mr. *Worsley's*, in the way to the south coast, the courses are;

- | | |
|------------|-------------------|
| 1. Turnips | 3. Clover, 1 year |
| 2. Barley | 4. Wheat. |

But what is more common, though it ought not to be,

- | | |
|------------|-----------|
| 1. Turnips | 5. Barley |
| 2. Barley | 6. Clover |
| 3. Clover | 7. Wheat. |
| 4. Wheat | |

THROUGH ENGLAND. 187

Wheat yields on an average 4 quarters an acre.

Barley, 5.

Oats after turnips, 7 to 10.

These crops are great; but the land is a fine, mellow, sandy loam, at 20s. an acre.

They use large quantities of chalk: it is a hard sort, and they lay 20 loads an acre, which they carry four or five miles. Some lands it agrees so well with, that they are always the better for it.*

Re-

* The country around *Apeldore-Combe* park is uncommonly fine. From the hill, great prospects are seen on every side; the surrounding hills wave in the noblest manner, and form in many places a striking outline to the sea: in the vales are many beautiful sweeps of inclosures, and several fine woods, all rich, and distinctly seen. The *Needles* (which are vast rocks at the west point of the island, 700 feet perpendicularly high) bound the view one way in the boldest manner, and, though fourteen miles off, rise so abruptly, that they appear but three or four.

All the way to *Steeple*, the country is very beautiful, many fine views every where breaking to the eye. At *Steeple* there is a shore, and edging of cultivation on a bold rocky sea-coast, beneath vast hills to the land, that has an appearance extremely striking. The whole way as you advance, you see here and there little birds-

188 THE FARMER'S TOUR

Returning to *Newport*, a little on one side of the town, lies *Carrisbrook* castle, where I was shewn the window, through which the unfortunate *Charles* in vain endeavoured to escape. An old gate-way, of good masonry, is in its stile curious; the view down into the vale on the village, with the church, half obscured with scattered wood, and an humble river, winding at the foot of the hill, contrasted by the ruins of the castle on a bold eminence, form an agreeable picture.

From

birds-eye landkips, a cottage, with a hay-stack or two under a few trees, and fine broken wild ground rising above it. These, and many other very picturesque views, entertain the traveller, in moving under the downs, among the inclosures, which lead by *Steeple*. After advancing about two miles, let him go up the hill, and return to *Steeple*, by the edge of the lower range of down. You there look down on the vale that skirts the sea, in the most pleasing manner; the coast forms an outline to the sea amazingly fine; the corn fields in some places seem to dip in the ocean; in others an humble shrubby vegetation forms the edging, hanging on the sides of the hills. The variety of the vale itself is great: the diversity of the spots of shrubby ground, broken with rocks, appearing among the rich inclosures, whose verdure emulates the power of painting, gives a contrast

THROUGH ENGLAND. 189

From *Newport* to *Cowes* the country is much inferior, both in beauty and fertility; indeed, all the northern half of the island is some degrees inferior to the southern. As to husbandry, the following is the state of it about *Cowes*, and in general through the northern part.

Farms rise from 20*l.* to 200*l.* a year, average 40*l.* to 80*l.*

The soil is a stoney loam on clay, much of it surprisingly full of flints: some fields are brick earth, and a few clay; the average rent 10*s.* ditto of the south side of the island 15*s.* of the whole 12*s.* 6*d.* The course of crops,

- | | |
|-------------------|----------------------|
| 1. Fallow | 4. Clover, ray-grass |
| 2. Wheat | and hop-clover, |
| 3. Barley or oats | two years. |

Also,

traff that strikes the beholder. Single trees in one place, clumps in another; farms, cottages, and all the riant touches of a truly chearful landscape, cut the little hills into distinct picturesque views, with an outline to the whole, as beautifully traced as fancy can conceive.

Mr. *Stanley*, governor of the island, has built a very elegant cottage, in a beautiful situation, beneath the downs: under one of the windows of the principal room, a spring, clear as crystal, rises into a large shell of stone, which is always full: it comes in at one aperture, and flows out at another.

190 THE FARMER'S TOUR

Also,

- | | |
|------------|------------------------|
| 1. Turnips | 3. Clover, &c. 2 years |
| 2. Barley | 4. Wheat. |

This good course does not extend to more than one field in a farm; the other bad one is most common.

For wheat they plough from three to five times; early in seed-time they sow two bushels, but late three; the crop two quarters and a half *per* acre. For barley they give two or three stirrings, sow four bushels, and reckon the average produce at four quarters. They plough but once for oats, sow four bushels and a half, and get four quarters in return. For pease they give but one earth, sow four bushels of the white sort, but only three or three and a half of hog pease; never hoe them; the crop three quarters and a half: they have no beans. For turnips they stir three or four times; some farmers hoe once, others not at all; all feed by sheep on the land; the value 42*s.* *per* acre. They both feed and mow their clover; they get from one to two loads of hay an acre, and then feed much of it. Tares they sometimes sow after clover, to cut green for soiling horses and a small quantity is ploughed in as a manure.

THROUGH ENGLAND. 191

manure. In the southern part of the island they sow them for feeding their sheep.

Sainfoine is also cultivated in the southern part; also a little buck-wheat on the sandy soils.

In their manuring they are pretty attentive, though not perfect: they have no folding. Paring and burning was once very common; but they think it did much mischief: and indeed no wonder; for after this operation, they ploughed and sowed corn perpetually, till they had totally exhausted the land, and then attributed the mischief to the paring and burning.

They lay on scarce any lime at present, though much was once used in common, and with success. An instance of its excellence I heard here: seven or eight years ago a field was limed with one bushel *per* rod: the soil so poor before liming as to bear nothing; but since that has constantly yielded good corn and clover. The price of lime 3s. a quarter.

Chalk has long been used; it is all a hard sort; they lay from 14 to 20 waggon loads *per* acre, as much as five or six horses can draw, which is three tons: the colours are white and blue: the land will be better for it 40 or 50 years. In

Sommerton

192 THE FARMER'S TOUR

Sommerton farm, farmer *Barter* 50 years ago chalked part of a field of brick earth, and it is now visible to an inch in both corn and clover; it also did as well on gravel; but it is very observable, that this chalk came in ballast from *Kent*; their own is not so good.

To go three miles for chalk, the carriage is 5*s.* a load, and 3*d.* the cost.

The management of their farm-yard manure is very bad: they chop no stubbles, nor do they confine their cattle to the yard in winter, but let them constantly run in and out, and they always are in the fields at night. However, they stack their hay at home.

Large quantities of town dung are bought by the best farmers, from *Cowes*, *Newport*, and *Portsmouth*; the last comes to 3*s.* a cart-load, freight and cost: this is a noble convenience.

The farmers in this island are by much the neatest people for *stacking* that ever I saw: all their hay and corn stacks, (and they have very little barn room on the largest farms) are round, drawn up as regularly as possible to a point, which is ornamented

ornamented with a little knob of straw; the thatch regularly cut round, and the outside bound in circles one foot distant from each other with brambles. It is surprising, with what exactness they build, and with what neatness they thatch them: they are really beautiful, nor can you easily imagine how much these stacks ornament the country; not a landscape is to be seen, without these chearful marks of, I may say, elegant plenty; and it is observable, that almost every little farmer, and farming man, are thatchers. The *Isle of Wight* is certainly the place for an accurate extensive husbandman to hire a servant from, with a view to spread the art of neat thatching.

There are many covered drains made in this part: they dig them two feet two inches deep, five wide at bottom, and twelve at top; fill them with chalk or stones picked off the land six inches deep, then fern or heath, (ling.) The labour is 8*d.* a rod, an extravagant price; and 4*d.* stones, &c. in all 1*s.*

They know nothing of plashing hedges, but cut up all the live wood in repairing

194 THE FARMER'S TOUR

an old one; but many hedges are kept regularly clipt: there are very few ditches.

Good grafs they apply to fatting beafts, or dairying: one acre in the fouth will fummer keep a cow; but in the north part of the ifland it takes one and a half. Their breed is the long-horned, but they have many *Alderneys*: three or four gallons are the common quantity of milk a day. Cows lett at 3*l.* 10*s.* and the whole produce 5*l.* 5*s.* To ten cows they keep about fifteen hogs; they keep them in winter on ftraw till calving. In rearing calves, fome farmers let them fuck two months, but others only a week, and then give them flet milk.

Their fwine fatten from 10 to 24 fcore.

They have here no flocks of fheep, but in the downs, which are a ridge of mountains that run through the center of the ifland from eaft to weft: they keep from 1000 to 1500; the profit in general is the lamb and wool.

Lamb,	-	-	-	-	£. 0 10 8
Wool,	-	-	-	-	0 2 0
Total,	-	-	-	-	0 12 8

But

THROUGH ENGLAND. 195

But many fat the wether lambs. In the northern part they buy in ewes in *November*; *Wiltshire*, *Dorsetshire*, or some of their own breed: the price from 10s. to 20s. average 15s. The lamb they sell fat about *Whitsuntide* at 15s. and the wool of the ewe is worth 2s. which 17s. is their profit; for they make nothing by the ewe, except the wool. Their winter food is chiefly grass, with a few turnips: the down flocks are winter kept on hay and turnips: the rot in sheep they attribute wholly to springs and fogs.

In their tillage they reckon eight or ten horses necessary for 100 acres of arable land; they use from four to six in a plough, and do from one acre to two in a day: the depth in general from three to six inches; but they now and then plough a little twelve inches deep: the price from 4s. to 10s. an acre. The total expence of keeping a horse, including decline of value and shoeing, they calculate at 15/.

Very little straw cut into chaff.

There are no ox teams in the island, except a few about *Brading*, where the farmers like them much for a part of their

196 THE FARMER'S TOUR

strength : they use six or eight in a plough. They break up their stubbles before *Christmas*.

In the hiring farms on this side the downs, they reckon 1000*l.* necessary for one of 200*l.* a year ; but on the other side 700*l.* or 800*l.* will do.

Land sells at 30 to 32 years purchase.

Tythes are both gathered and compounded, from 2*s.* to 4*s.* in the pound ; average 3*s.* 6*d.*

Poor-rates 1*s.* to 5*s.* 7000*l.* a year is raised in the whole island by poor rates, which the inhabitants think so great a burthen, that they have had some meetings to consider of an application to parliament for an house of industry. The poor have no employment from manufactures ; but all drink tea twice a day.

All the farmers have leases.

LABOUR.

In harvest, 40*s.* a month and board.

In hay-time, 1*s.* 6*d.* and beer.

In winter, 1*s.* 1*d.* $\frac{1}{2}$ and beer.

Reaping, 4*s.* 6*d.*

Mowing corn, 1*s.* 3*d.*

Mowing

THROUGH ENGLAND. 197

Mowing grafs, 2s.

Hoeing turnips, 5s.

Thrashing wheat, 2s. to 2s. 6d. a quarter.

———— Barley, 1s. to 1s. 6d.

———— Oats, 8d. to 1s.

———— Pease, 1s. 6d.

Head-man's wages, 7l. 7s. to 10l. 10s.

Next ditto, 5l. 5s. to 7l. 7s.

Lad's, 30s. to 3l. 10s.

Dairy maid's, 4l. 4s.

Other ditto, 3l.

Women *per* day in harvest, 1s. and beer.

In hay-time, 6d. to 8d.

In winter, 6d.

Value of a man's board, washing and lodging, 5s. a week.

Labour in general is raised a seventh in 20 years.

PROVISIONS.

Bread, 1d. $\frac{1}{4}$ *per* lb.

Cheese, 2 to 3

Butter, 8

Beef, 3 $\frac{1}{2}$

Mutton, 3 $\frac{1}{2}$

Veal, 4

Pork, 3 $\frac{1}{2}$ to 4

Bacon, 4 $\frac{1}{2}$

O 3

Milk,

198 THE FARMER'S TOUR

Milk, $\frac{1}{2}$ d. per pint.
 Potatoes, 1 s. a peck.
 Labourer's house-rent, 2 l. to 3 l.
 ——— Firing, 20 s. Many steal all.

The particulars of a farm.

400 Acres in all	30 Clover
300 Arable	18 Horses
40 Grass	20 Cows
60 Wood	200 Sheep
200 l. Rent	20 Hogs
75 Wheat	8 Men
30 Barley	2 Boys
45 Oats	3 Maids
75 Summer fallow	6 Labourers,
6 Turnips	

Another :

1000 Acres in all	40 Turnips
300 Down	60 Clover
400 Arable	10 Tares
300 Grass	10 Wood
500 l. Rent	1200 Sheep
120 Wheat	20 Horses
120 Barley	16 Draft oxen
20 Oats	24 Cows
60 Summer fallow	40 Young cattle

THROUGH ENGLAND. 199

60 Swine

3 Maids

15 Men

6 Labourers.*

5 Boys

* *John Stevens*, Esq. of *West Cowes*, to whom I am obliged for the above account of husbandry, has an agreeable seat on a rising ground near the sea, which commands a noble view of the channel from *Portsmouth* quite to *Lymington*, and the mouth of the *Southampton* river. The high lands in *Suffex*, the hills in *Hampshire*, and the woody coast of the *New Forest*, all bound the view, and form for one stroke of the eye the noblest river perhaps the world can exhibit: the breadth from three to seven miles, and the length from twenty-five to thirty. This beautiful expanse of water is scarcely ever free from the enlivening addition of all sorts of ships, from the largest men of war down to some hundreds of fishing-boats. Every moment gives a new view of fleets, and the attitudes of the single ships offer a variety uncommonly entertaining. Upon the whole, it much exceeds any sea prospect: the unentertaining range of a boundless ocean strikes at first a sublime idea; but the repetition of the view has few charms: whereas this prospect fatigues in nothing. You either command distinctly a noble lake land-locked in a most various manner, or, as you vary your position, a winding river that cannot be exceeded in beauty.

The home views, about Mr. *Stevens's* grass-plot, are admirably pleasing: the town of *Cowes* in a bottom, hid by wood, is marked by the course of the shipping that are constantly

moving to and from it. Above the town a hill of uncultivated land rises finely, and forms a strong projection to the sea, finishing in a space of wild woody ground: the whole a very bold shore. From one of the seats, you look through the stems of four large trees on to a very pretty landscape: a river at the bottom of a vale, a few houses on its banks, backed with a rising hill cut into inclosures, and variegated with woods, trees, hedges, &c.—the scene picturesque. There is another landscape, a true bird's-eye one, caught through the branches of two old oaks, that cannot but please: it is a rich scenery of inclosures, that stretch one beyond another on the hills, till they rise to the distant mountains, and are lost in spreading woods.

At the distance of a mile or two from *Cowes* is a spot called *Gurnard-Bay*; from the hills by which, is a very fine and romantic view: the water breaks boldly into the land in various bays and creeks. In front, the view is bounded on the other side the water by *New Forest*, with the distant hills beyond. The *Dorsetshire* hills rise in fine varieties; in particular one large and two small and irregular ones. To the left, the island projects in four promontories, which are distinctly seen one beyond another: the furthest is a hill in a dark shade; the next, higher grounds, varied in inclosures; nearer to you another, in which the corn fields, cut by fine hedges, break boldly to the very water: the ploughmen seem to tread the main. A piece of wild broken ground, forming a noble shore, separates this land from another promontory almost at your feet, which is a fine slope of wood, that dips quite to the water: its head a cultivated field. The whole scene

scene is complete, all within the eye's ken; the whole great, various and beautiful. Nor is the northern part of the island destitute of more rural views, though not in the whole equal in them to the southern. From *Cockleton* farm, in *Northwood* parish, a vale winds under a spreading hill, cut into inclosures, and finely fringed with wood, on which the views are truly picturesque; the water is not much seen, but it is varied by an admirable outline of hill and wood, through which it twice breaks: likewise from the junction of three lanes, that lead to *Newport*, *Gurnard*, and *Ruge-Street*, is seen a true painter's landscape.

The *Isle of Wight* has very numerous advantages to recommend it as a most agreeable spot to reside in: no place is happier in the beauties of a varied country: here are hills, dales, mountains, rocks, wood and water, all in perfection; a sea-coast that has not a perch of flat land; it all rises boldly from the water: they scarcely know what a marsh is. The land is admirably fertile in both grass and corn; game, particularly pheasants, in the greatest plenty: all provisions good, and surrounded by a sea, full of the finest fish in *Britain*. That it is healthy cannot be doubted, from the singularly happy circumstance of not a physician being there. *Quere*, Is this the cause or the effect?

A fox is another animal not to be found in this island; consequently they are without a species of vermin by no means so innocent — the hunters of him; of whom there is too often reason to doubt, (at least it is so in my neighbourhood) whether the animal that flies, or the brute that pursues, be the greater beast of the two.

LETTER XXV.

FROM *Cowes* I took boat for *Southampton*; the river which leads to that town is a very fine one. The town is large, well built; and the company which regularly resorts thither, much enriches and enlivens the place.

To *Winchester* the country is various; but has much land that is waste, and poorly cultivated. Near the latter city it consists chiefly of chalk hills uninclosed. I passed from *Winchester*, a country I had before travelled, to *Alresford*, to view the husbandry of *James Rodney*, Esq. of that place; of which, and the management of his neighbours, the common farmers, he favoured me with the following account.

Experiment, No. 1.

Mr. *Rodney* tried a change of seed, by procuring 2 bushels of blue cone wheat from *Gloucestershire*, which he sowed on 3 rood of land; it yielded 24 bushels in return, which for the land was a vast produce;

duce; had it been sown with their own seed, an acre would not have yielded more than 20.

Experiment, No. 2.

A field of sainfoine lying conveniently for mowing, but not for feeding; this gentleman tried the mowing it for soiling horses, in the same manner as lucerne, clover, or any other grafs. He did this all last summer, and the same this year. It has often been asserted, that mowing sainfoine more than once destroys it; but on the contrary, this field has suffered not the least from it. The soil is a light loam on chalk, worth 10s. an acre.

Experiment, No. 3.

Last year Mr. Rodney made 10 loads of sainfoine hay; which from repeated rains was so damaged, that his people pronounced it three quarters spoiled. He salted it in the stacking with only 1 bushel of salt, and it completely recovered it.

Experiment, No. 4.

Four hogs, porkers, were fattened on potatoes; they did extremely well; no
pork

204 THE FARMER'S TOUR

pork was finer, whiter, or sweeter; the potatoes were boiled, and given without any barley, pease, &c.

Experiment, No. 5.

Three acres were sown with coleseed in 1767; in the winter there happened a deep snow, in which the crop came into use for the lambs, and was of great service. They were baited in it till *May*; and were sold at 15s. each; which was an extraordinary price. Both the cows and swine were also fed on it. Afterwards it was seedcd, and he sold the crop for a guinea an acre.

Experiment, No. 6.

Soot Mr. *Rodney* tried for wheat, 15 bushels per acre, at 6d. a bushel; it answered greatly.

Mr. *Rodney* uses a *Notfolk* wheel plough, with a pair of horses and no driver; it answers greatly, but none of the farmers follow the example; they all use 4 horses and a driver.

Farms around *Alresford* rise from 60l. to 300l. a year; but in general from 120l. to 140l.

The

THROUGH ENGLAND. 205

The soil is a light loam on chalk; but the hills are clay; rents, 6s. to 10s.

The rent from hence to *Crux Easten* 5s. or 6s. much at 2s. 6d. and 3s.

To *Winchester* 6s.

To *Southampton*, on an average, 8s.

To *Portsmouth* 10s.

To *Basingstoke* 6s. to 8s.

To *Andover* 6s.

The course of crops here;

- | | |
|-----------------------|-------------------|
| 1. Turnips | 5. Wheat |
| 2. Barley | 6. Barley or oats |
| 3. Clover, ray-grass, | 7. Clover, &c. |
| and trefoile, two | and then some add |
| years | 8. Oats. |
| 4. Summer fallow | |

Another:

- | | |
|-------------------|-------------------|
| 1. Pease or tares | 4. Clover 2 years |
| 2. Wheat | 5. Fallow |
| 3. Barley | 6. Wheat. |

Both are strange courses. They plough three times for wheat; sow $3\frac{1}{2}$ bushels an acre; but Mr. *Rodney* only 3. The crop 2 quarters.

For barley they give but 2 ploughings; sow 4 or 5 bushels an acre, and gain in return $3\frac{1}{2}$ or 4 quarters. For oats only

206 THE FARMER'S TOUR

one ploughing; sow 5 or 6 bushels of seed; the crop 4 quarters. They give 2 or 3 earths for pease; sow 4 bushels; never hand-hoe them; the mean produce 2 quarters. They do not cultivate any beans.

For turnips they plough 3 or 4 times; hand-hoe them once; and the best farmers twice; feed them all off with sheep.

Their clover they mow first for hay, and then for seed; but much is fed with sheep: Tares they sow for the same purpose.

There is much sainfoine in this country; they mow it first for hay, of which they get $1\frac{1}{2}$ ton an acre; after which they eat it with weaning lambs and other cattle; the after-grass worth 5 s. an acre.

In respect to manuring, they all fold their sheep in winter as well as summer, except just while the lambs are young and weak; they fold their new sown wheat; a practice which they find very advantageous.

Paring and burning is known here for breaking up old sainfoine; the price 1 l. 1 s. an acre; and sow oats, turnips, or sometimes wheat on it if they design to lay it again to sainfoine. The first crop is turnips;

THROUGH ENGLAND. 207

nips; the 2d, Barley; 3d, Oats; 4th, a Fallow; 5th, Barley and Sainfoine.

Lime the duke of *Bedford* tried on chalk land, in the way to *Andover*, but it did no good.

They confine their cattle to the farm-yard in winter, and stack their hay at home; but none of them chop their stubbles.

Their fences are very bad, they have no ditches, and very little plashing; but their herdle hedges, woven like herdles, they execute extremely well: the expence *per* rod, $3\frac{1}{2}$ feet high, is 4*d.* workmanship, and 1*s.* stuff and carriage.

The best meadows let at 50*s.* an acre. In the spring they feed them with lambs; in *May* water them; then they take a crop of hay of $1\frac{1}{2}$ or 2 ton an acre; then water again and feed down with cows: an acre would be sufficient to summer feed a cow, and yield some sheep feed besides.

Their breed of cattle is the short-horned; they give $2\frac{1}{2}$ or 3 gallons of milk a day; are let at 3*l.* but pay in total produce 6*l.* Their winter food straw; but have a little hay at calving.

208 THE FARMER'S TOUR

Flocks of sheep rise from 300 to 1500 of stock flocks. The profit lamb and wool.

Lamb,	100	10	0
Wool,	10	2	0

0 12 0

They keep them in the winter in their lays; but give some turnips in the spring.

In their tillage they reckon 5 horses necessary for 100 acres of arable; use 4 in a plough, and do an acre a day; the depth 4 inches; and the price 8s. They break up their stubbles before *Christmas*: use only wheel ploughs. They practise the cutting straw into chaff. In hiring and stocking farms, they reckon 1400*l.* necessary for 200*l.* a year.

Land sells at 32 years purchase.

Tythes are chiefly gathered.

Poor rates 1*s.* 6*d.* in the pound: 35 years ago but one pauper; now 80*l.* a year.

The employment of the poor women and children spinning. They drink tea twice a day.

All the farmers have leases.

Par-

THROUGH ENGLAND. 209

Particulars of a farm.

650 Acres, all arable	10 Tares
160 <i>l.</i> Rent	8 Men
100 Sainfoine	4 Boys
80 Wheat	1 Maid
100 Barley	3 Labourers
100 Oats	16 Horses
80 Fallow	6 Cows
50 Turnips	1000 Sheep
10 Pease	40 Swine.
20 Clover	

Returning to *Southampton*, I coasted round the river by *Redbridge*, &c. and crossed a part of *New Forest* to *Gilbury*, the seat of *William Milford*, Esq.

That gentleman's grand-father, and father, being great planters, he was able to give me some very valuable intelligence concerning planting of various useful trees.

Experiment, No. 1.

A plantation of cedars of *Lebanon*, silver firs, spruce firs, and pinasters of 40 years growth, is set in squares of 6 feet. These were measured.

The cedars contained $15\frac{1}{2}$ feet of timber, worth 1*s.* the top 1*s.* or 16*s.* 6*d.* each: 35 feet high.

210 THE FARMER'S TOUR

Some of the silvers 50 feet high; 35 feet of timber, at 9*d.* the top 2*s.*; or 1*l.* 8*s.* 3*d.*

The medium silver, 13 $\frac{1}{2}$ feet; top 1*s.* or 11*s.* 3*d.*

The spruce ditto 38 feet high; 17 $\frac{1}{2}$ feet of timber, at 9*d.* top 2*s.*; in all 15*s.* 3*d.*

Pinafters. No. 1 12 feet.

2

35

3

33

4

17

5

33

6

19

7

17

Average 23, at 9*d.* and the top 1*s.* 6*d.*; in all 18*s.* 9*d.*

Cedars, 16*s.* 6*d.*—Silver, 11*s.* 3*d.*—

Spruce, 15*s.* 3*d.*—Pinafter, 18*s.* 9*d.*

Hence it appears that the pinafter is of these the most profitable; and next the cedars; the average value of the four, is 15*s.* 5*d.* An acre of land left in squares of 6 feet, contains 1210 trees; the value, at 15*s.* 5*d.* amounts to 932*l.* 14*s.*

THROUGH ENGLAND. 211

Expences per acre.

First raising, planting, fencing, &c. See Vol. I. p. 332.	£.3 0 0
Rent and rates, at 12s. for 40 years, - - -	24 0 0
Reparation of fences, suppose	1 10 0
	28 10 0
Product exclusive of thinnings,	932 14 0
Expences, - - -	28 10 0
	904 4 0
Profit, - - -	904 4 0
Which is <i>per acre per ann.</i>	22 11 0

This profit is surprizingly great; much exceeding any thing that husbandry can produce.

To reap above 20*l.* an acre from the first day of planting, exclusive of thinnings, is a profit that proves how fine a resource landlords have for raising large sums of money, who can wait such a period for the return. But had these trees been cut at 20, 25, or 30 years, there can be no doubt but the profit would have been very great, though not so high as 40 years. The value of the fee-simple of land, soon

212 THE FARMER'S TOUR

after planting, bears no proportion to that of the timber on it. Is not this, therefore, a ready way to double, treble, and quadruple estates?

Experiment, No. 2.

In another plantation of 38 years growth. The *Scotch* firs contain 8 feet of timber, at 6*d.* a foot; and the top 1*s.* this is 5*s.* They are 39 feet long.

Spruce in the same 29 feet long; 4 feet timber, at 6*d.* and the top 1*s.*; this is 2*s.* 6*d.*

Silver, 30 feet long; 5 feet of timber, at 6*d.*; top 1*s.* or 3*s.* in all.

Experiment, No. 3.

In another plantation of 45 years growth, planted 6 feet square. The spruce are on an average 36 feet long, and contain $9\frac{1}{2}$ feet of timber, at 8*d.*; the top 1*s.* 6*d.*; in all 7*s.* 10*d.*

The *Scotch* 34 feet long; $12\frac{1}{2}$ of timber, at 8*d.*; the top 2*s.*; in all 10*s.* 4*d.*

The silver 40 feet long; $11\frac{1}{2}$ of timber, at 8*d.*; top 1*s.* 6*d.*; or 9*s.* 2*d.*

THROUGH ENGLAND. 213

The spruce,	-	£. 0	7	10
The <i>Scotch</i> ,	-	0	10	4
The silver,	-	0	9	2
Average	-	0	9	1

1210 trees on an acre, at 9s.

1 d. are,	-	-	549	10	0
Deduct—raising, &c.	3	0	0		
Rent, &c.	45				
years, at 12 s.	27	0	0		
Reparations,	1	10	0		
				31	10 0

Profit,	-	-	518	0	0

Which is <i>per ann.</i>	-	-	11	10	0

Experiment, No. 4.

In another plantation, the growth of which is 17 years, and the trees at 7 feet square.

The *Scotch* firs, top and all, are worth 1s. each.

The spruce, 1s. 6d.

Average, 1s. 3d.

At 7 feet square, there are 888 on an acre, which at 1s. 3d.

are,	-	-	-	£. 55	10 0

Carry over,	-	-	55	10	0
-------------	---	---	----	----	---

214 THE FARMER'S TOUR

Brought over,	-	£.55	10	0
Deduct—raising, &c.	£.3	0	0	
Rent 17 years,				
at 6s.—	5	2	0	
Reparations,	1	10	0	
			9	12 0
Profit,	-	-	-	45 18 0
Or <i>per annum</i> ,	-	-	2	14 0

Here we see an instance of making 2*l.* 14*s.* *per acre per ann.* from the first planting of poor land, at 6*s.* an acre: and I should remark that this plantation is on a hill exposed to the south-west; which wind here blows with a fury that none can exceed, as all the trees in the country bear ample testimony, by turning their blasted heads from it. No husbandry will with so little, or rather with no trouble, hazard, or expence, equal this profit on such poor land. And it is made in the term of 17 years; which admits of so many men to plant, and expect themselves to reap the profit.

Experiment, No. 5.

In another plantation of *Scotch* firs of 30 years growth; the distance 3 feet square; the

THROUGH ENGLAND. 215

the trees are on an average 2 s. 6 d. each.

This wood was never thinned.

On an acre, at 3 feet, are 4840

trees, which at 2 s. 6 d. come

to - - - £.605 0 0

Deduct—raising,

&c. £.3 0 0

Rent, at

8 s. 12 0 0

Reparations 1 10 0

16 10 0

Profit, - - - 588 10 0

Which is *per ann.* - 19 18 0

This astonishing profit offers one very material lesson, which is, that necessity does not require a plantation to be thinned with a view to profit, for though the trees come to a much larger size, yet the superior number in the other case, more than make amends at a lower value; but perhaps a mean conduct would be most advantageous; *viz.* not to thin till the trees are of some value, for instance, 1 s. each, or 9 d.; then they would raise money; but thinning in 5

216 THE FARMER'S TOUR

or 10 years after planting, they amount to nothing but fire-wood.

Experiment, No. 6.

In another wood of *Scotch* firs unthinned, of 30 years growth, an oblong piece of ground was measured, of 26 feet long, by 8 broad; and every tree in it valued:

No. 1.	-	£.	0	0	6
2.	-	0	0	3	
3.	-	0	0	8	
4.	-	0	0	6	
5.	-	0	1	0	
6.	-	0	0	8	
7.	-	0	1	0	
8.	-	0	1	0	
9.	-	0	0	2	
10.	-	0	2	6	
11.	-	0	2	0	
12.	-	0	1	6	
13.	-	0	0	3	
14.	-	0	1	0	
15.	-	0	0	6	
16.	-	0	0	3	
17.	-	0	2	6	
18.	-	0	2	0	
19.	-	0	1	6	
20.	-	0	1	6	
		<u>1</u>	<u>1</u>	<u>3</u>	

THROUGH ENGLAND. 217

The piece of land contains 208 square feet: there are 209 such pieces in an acre; the amount would there-

fore be, - -	£.222 1 0
Deduct expences as in No. 5,	16 10 0

Profit, - -	205 11 0
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Or <i>per ann.</i> - -	6 15 0
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This is vast profit, but not near equal to the other; which I attribute to their standing in spots so very thick, for many of them were only 12 or 18 inches asunder—regularly planting in squares must undoubtedly be necessary.

Experiment, No. 7.

In another plantation of 34 years growth, at 6 feet square. The spruce are worth 3s. 6d.

The *Scotch*, 3 s. 6 d.

The silver, 5 s.

Average, 4 s.

On an acre 1210, at 4s.

come to - -	£.242 0 0
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Carry over, - -	242 0 0
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218 THE FARMER'S TOUR

Brought over,	-	£. 242	0	0
Deduct—raising,				
&c.	£. 3	0	0	
Rent, at 8s.	13	12	0	
Reparations	1	10	0	
			18	2
Profit,	-	-	223	18
Or per ann.	-	-	6	11

Experiment, No. 8.

In another plantation of 29 years growth, a part was measured, of 40 feet long by 23 broad, and contained 20 trees; valued, after measuring, as under.

No.	Value.
1.	£. 0 10 0
2.	0 2 0
3.	0 5 0
4.	0 3 0
5.	0 7 6
6.	0 7 0
7.	0 1 0
8.	0 4 0
9.	0 4 0
10.	0 6 0
11.	0 7 0

THROUGH ENGLAND. 219

No.	Value.
No. 12.	6 0
13.	6 6
14.	8 0
15.	4 0
16.	6 0
17.	6 6
18.	5 0
19.	4 0
20.	4 0
	5 6 6

There are 47 pieces in an acre, consequently the value would be £.250 5 0

Deduct—raising, £.3 0 0

Rent, at 2s.

6d. 3 12 6

Reparation, 1 10 0

8 2 6

Profit, 242 2 6

Or per ann, 8 7 0

Experiment, No. 9.

In another plantation of 30 years growth, *Scotch* firs, at 6 feet square, are worth on an average 5s. each.

220 THE FARMER'S TOUR

1210, at 5s.	-	£. 302 10 0
Deduct—raising, &c.	£. 3 0 0	
30 Years rent,		
at 5s.	- 7 10 0	
Reparations,	1 10 0	
		12 0 0
Profit,	-	290 10 0
Or per ann.	-	9 16 0

Experiment, No. 10.

In another plantation, at 8 feet square, of 19 years growth. The value of the trees are as follow;

Silver firs, 3s.

Scotch, 3s.

At 8 feet there are 680 on an		
acre, which at 3s. come to	£. 102 0 0	
Deduct—raising, &c.	3 0 0	
Rent, 12s.	11 8 0	
Reparations,	1 10 0	
		15 18 0
Profit,	-	86 2 0
Or per ann.	-	4 10 0

THROUGH ENGLAND. 221

Experiment, No. 11.

In a wood, 48 years growth of pinafter, 10 feet square, they are come to 48 feet of timber, at 9*d.*; 1*l.* 16*s.*; and top 2*s.*; 1*l.* 18*s.* each.

At 10 feet, there are 435 trees

on an acre; which, at 38*s.*

come to - - - £.826 2 0

Deduct—raising, &c. 3 0 0

Rent, at

12*s.* 28 16 0

Reparation, 1 10 0

33 6 0

Profit, - - - 792 16 0

Or *per ann.* - - - 16 10 0

Recapitulation.

Experiment, No. 1. Silver, . Profit *per*
Cedars, *acre per ann.*

Spruce,

Pinafters,

Growth 40 years, - £.22 11 0

No. 3. Scotch,

Spruce,

Silver,

45 Years growth, - 11 10 0

220 THE FARMER'S TOUR

1210, at 5s.	-	£.302 10 0
Deduct—raising, &c.	£.3 0 0	
30 Years rent,		
at 5s.	- 7 10 0	
Reparations,	1 10 0	
		12 0 0
Profit,	-	290 10 0
Or per ann.	-	9 16 0

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Silver firs, 3s.

Scotch, 3s.

At 8 feet there are 680 on an acre, which at 3s. come to £. 102 0 0

Deduct—raising, &c.	3 0 0	
Rent, 12s.	11 8 0	
Reparations,	1 10 0	
		15 18 0
Profit,	-	86 2 0
Or per ann.	-	4 10 0

THROUGH ENGLAND. 221

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At 10 feet, there are 435 trees on an acre; which, at 38s.

come to - - £.826 2 0

Deduct—raising, &c. 3 0 0

Rent, at

12s. 28 16 0

Reparation, 1 10 0

33 6 0

Profit, - - 792 16 0

Or per ann. - - 16 10 0

Recapitulation.

Experiment, No. 1. Silver, Profit per
Cedars, acre per ann.

Spruce,

Pinafters,

Growth 40 years, - £.22 11 0

No. 3. Scotch,

Spruce,

Silver,

45 Years growth, - 11 10 0

222 THE FARMER'S TOUR

Experiment, No. 4. Scotch, Spruce, Profit per acre per ann.

17 Years, £. 2 14 0

No. 5. Scotch,
30 Years, 19 18 0

No. 6. Scotch,
30 Years, 6 15 0

No. 7. Spruce,
Scotch,
Silver,
34 Years, 6 11 0

No. 8. Scotch,
29 Years, 8 7 0

No. 9. Scotch,
30 Years, 9 16 0

No. 10. Scotch,
Silver,
19 Years, 16 10 0

No. 11. Pinafter,
48 Years, 16 10 0

40 Years, £. 22 11 0

45, 11 10 0

34, 6 11 0

48, 16 10 0

Average, 14 5 0

THROUGH ENGLAND. 223

30 Years,	£. 19 18 0
30 0 8 12 -	6 15 0
29 8 1 8 12 -	8 7 0
30 0 1 8 12 -	9 16 0

Average, - 11 4 0

17 Years,	2 14 0
19, -	16 10 0

Average, - 9 12 0

34 to 45 years, 39	-	13 10 8
29 and 30, 29½,	-	11 4 0
17 and 19, 18,	-	9 12 0

Hence it appears that on an average of these plantations, the profit *per acre per annum*, from the first planting, is proportioned to the age of the wood; the longer they are left, the greater the profit.

The vast benefit of planting to posterity, never yet admitted a moment's doubt; but I would here principally endeavour to shew, that the young man who plants these quick growing trees, may, according to the common course of nature, expect to reap the profit.

5
Nor can any other application of the land

224 THE FARMER'S TOUR

No. 1.	40 years,	total profit,	£.904	11	0
3.	45,	-	-	518	0 0
7.	34,	-	-	223	18 0
11.	48,	-	-	792	16 0

Average, - - - 609 16 0

No. 5.	30 years,	-	-	588	10 0
6.	30,	-	-	205	11 0
8.	29,	-	-	242	2 6
9.	30,	-	-	290	10 0

Average, - - - 331 13 0

No. 4.	17 years,	-	-	45	18 0
10.	19,	-	-	86	2 0

Average, - - - 66 0 0

In 41 years, 100 acres of land will yield the profit of 60,980 £.

In 30 years, that quantity of land will yield in profit 33,165 £.

In 18 years, 100 acres will yield in profit 6,600 £.

It is to be remembered that all expences of the rent, &c. &c. are deducted; these sums are neat profit.

Nor can any other application of the
 1 land

land equal this of planting; for the annual profits of 14 *l.* 5*s.* of 11 *l.* 4*s.* and of 9 *l.* 12*s.* much exceed any crop that husbandry can yield. Most of the land, on which these plantations are made, is of a middling quality; some of it very bad; a poor hungry springy gravel. Now such land, managed in the best manner possible, would never near equal the great annual profit of 9 *l.* 12*s.* *per* acre, which may be gained by any farmer hiring land on a twenty-one years lease, by planting and cutting down his own trees.

How many men come to their estates at from 20 to 25 years of age. Suppose such landlords to plant 100 acres, they reap more than 60,000 *l.* by that time they are 63. That sum of money would surely be no disagreeable acquisition at any age!—and what renders this system of planting peculiarly important to the country in general is, that these trees do not seem to be nice in soil—poor ones that do not answer well in husbandry, are as profitable in planting as any; and great numbers of the waste and ill-cultivated lands in this kingdom might be thus applied, to vast

advantage, not only to the amount of all our importations from the *Baltic*, but also to another object, perhaps yet more important, to the saving all young oaks, &c. that are in so many parts of the kingdom cut down to waste, rather than send to sea-ports, &c. for fir.

It is no trifling quantity of land that might be annually cleared of firs of all sorts in this kingdom, at a very advantageous price.

Mr. *Mitford* has made some general observations on this subject that are of importance. First, The silver fir he finds to stand the fury of the south-west wind much better than any other; where the spruce are shattered in pieces, and even the *Scotch* turn their heads from the blast, the silver preserve themselves perfectly erect: one in particular, 40 years old, which stands full exposed on a hill to that furious quarter, is now 45 feet high, and measures 40 feet of timber, worth 15. a foot.

There is another singularity in this fir that deserves mention: it will bear immediate use without contracting. Mr. *Mitford* cut down a large one in *July*, and in the

the *November* following it was sawn and laid in a floor in his library, and this without suffering the least contraction from that time to the present, which is more than two years. This quality of the wood will for many uses render it uncommonly valuable.

It is further observable, that, however stunted a silver fir is from being dripped on by other trees, if the obstructions to its growth are removed, though it be many years old, it will then take a fresh and vigorous growth, as if nothing had ever delayed its progress.

I should remark, that the preceding prices were taken on the spot by Mr. *Mitford's* carpenter, who measured those trees that were timber, and valued the rest. The prices are such as he would have given, and supposing the purchaser to be at the expence of felling and taking away.

The neighbourhood of that vast tract of waste country, called *New Forest*, made me desirous of gaining what intelligence I could concerning its present state: my information was not so extended as I could

Q 2

with;

228 THE FARMER'S TOUR

wish; but in some particulars it was decisive.

After the numerous encroachments that have been made, there yet remain 80,000 acres. Relative to the rights enjoyed by the neighbourhood of it, they are various: the inhabitants of some manors have a right of commonage; but no other right: others have a right to cut turf; but none of commonage: some have that of firing-wood; but neither turf nor common: and a few have all three.

The soil is extremely various; from very poor land, covered with a stunted ling, to extreme rich soils, that yield good grass; and others that are covered with fern and whins, which in this country are reckoned the signs of good land. The inclosures around it, that are under the plough, let from 5*s.* to 21*s.*; the average 10*s.* 6*d.* but they are here supposed to be worth 13*s.* being in general underlet: however, the forest inclosed would lett very readily for the same rents as the adjoining inclosures: some parts of it, which yield only a very poor ling on a white gravel, would not lett for more than 1*s.* an acre; but such tracts are not extensive.

It is curious to remark very ancient marle-pits in the forest, in places where there are no signs of any modern cultivation. A strong proof, that this husbandry was common before the Conquest.

The tracts of forest between *Lindhurst*, *Brokenhurst*, and beyond *Pondhead*, and likewise from *Binley* to *Lindhurst*, are the best in the forest: they would lett for 21s. an acre, without any improvement but that of inclosing.

I enquired particularly into the utility of this great tract of land, in furnishing timber for the royal navy, and I found the benefit of it in that point very inconsiderable, compared to the extent. Fells of ship-timber are not often made; lately there has been some cut, but the amount not great.

However, this piece of information was not of consequence; for I well knew, that the product of an open forest, stocked with deer, and quite scattered over with villages or single houses, could not possibly yield a product of timber nearly proportioned to its extent. The cattle that are kept wild on it, and the deer, destroy nine young

230 THE FARMER'S TOUR

trees out of ten, by breaking and cropping them; and the depredations that are made by plunderers, the *great* more than the *small*, of which the stories common around the forest give no bad idea, effectually keep down the growth of timber. In such a vast waste some must escape; but that the quantity is small, we learn from the trifling resource this forest proves to our navy.

Upon the whole, there is not a shadow of a reason for leaving it in its present melancholy state; but every one concurs to prove the expedience and propriety of converting it into farms.

A good nursery of oak timber for the royal navy ought never to be destroyed; on this account, let us make a very ample allowance, much above the fact, and suppose there are 10,000 acres, which, in a division of the forest, would be found proper to leave as nurseries for timber in various spots, where the growth was thickest and best: all to be well and perfectly inclosed, and vacancies supplied by planting acorns. Any man acquainted with the forest will at once acknowledge, that such
a tract

a tract preserved fairly for timber alone, and all grazing in it by cattle or deer excluded, would yield the navy four times the timber, which is at present gained from the whole 80,000 acres.

Seventy thousand remain: I shall from these suppose another deduction of 20,000 acres of the worst soils for planting with firs, in conformity to Mr. *Mitford's* plantations, which have proved so uncommonly advantageous.

I shall suppose 10,000 acres, (a vast allowance) as an equivalent to all the parishes and manors, for their rights of common, wood and turf, and also for roads, &c.

Forty thousand acres of the best land remain for converting into farms, which I shall suppose divided into tracts of 640 acres; each farm to contain nine fields, the buildings in the center; the fields to be inclosed with a ditch, a quick hedge, &c. and ten gates; also a house, a barn, stables, &c. &c. as in the calculation, Vol. IV. page 399, of the *Six Months Tour*: the total expence 1114*l.* Forty thousand acres at that rate would come to the expence of 69,625*l.*

232 THE FARMER'S TOUR

Expences.

Raising the young firs, planting, &c. This with inclosing has been done for 3 <i>l.</i> an acre. Here will be no inclosing, as those of the farm surround all the plantations: however, I shall suppose it 3 <i>l.</i> ; that, for 20,000 acres, is - - -	£. 60,000
Inclosing 40,000 acres for farms, raising the buildings, &c.	69,625
Suppose sundry expences unsp- ecified, to amount to -	10,375
Total expence, -	<u>140,000</u>

Product.

Rent of 40,000 acres in farms, at 15 <i>s.</i> 30,000 <i>l.</i> <i>per ann.</i> which in 40 years amounts to - - -	1,200,000
The average gross product of Mr. <i>Mitford's</i> plantations, from 30 to 48 years growth, is 526 <i>l.</i> <i>per acre</i> ; 39 years the average: 20,000 acres at that rate would yield -	10,520,000
Total, - - -	<u>11,720,000</u>

THROUGH ENGLAND. 233

Brought over,	-	£. 11,720,000
Expences,	-	140,000
Remains neat profit,		11,580,000

I state the account in a total of forty years, to bring both the farms and planted land into one view: the product would be an annual one, and consequently marketable; but in forty years the state would gain thus immensely, at the same time that the royal navy would be far better supplied with timber than hitherto from this forest; at the same time that industrious population would be vastly encreased,* and circulating wealth receive a very considerable addition, besides the income above specified, in that raised by all the farmers, and people employed under them.

I never shall be deterred from offering such calculations, because none have yet been executed, or because the world is full of mean souls, who deem every noble undertaking of this sort visionary: a proposition

* According to the proportion of fifteen souls per 100 *l.* a year, they would amount to 4500.

234 THE FARMER'S TOUR

position of this sort is not ridiculous, because so many will read merely to ridicule it. But nothing is here supposed, that has not been already executed: the profit of planting is drawn from what is now actually existing on this very soil; and farms of good land, without such advantages as these possess, now let for more than I suppose.

The following is the state of husbandry about *Gilbury*. Farms rise to 250*l.* and 300*l.* a year, average about 100*l.* a year. The soil is a heavy loam on gravel or marle; rent 10*s.* 6*d.* an acre.

The course of crops;

- | | |
|-----------|--------------------|
| 1. Fallow | 4. Oats |
| 2. Wheat | 5. Clover and ray- |
| 3. Barley | grafs for 3 years. |

About *Fawley* it is,

- | | |
|------------|---------------------|
| 1. Turnips | 4. Oats |
| 2. Barley | 5. Clover, 3 years. |
| 3. Barley | |

For wheat they plough three times, sow two and a half or three bushels an acre; the crop two quarters and a half. They stir three times for barley, sow four bushels an acre, the crop three quarters and a half; but

but Mr. *Mitford*, by hoeing his turnips and a better course, gets five. They plough but once for oats, sow four or five bushels an acre: the crop four quarters.

They plough but once for pease, sow four bushels *per* acre, never hoe, and reckon the mean produce at two quarters and a half: they have no beans.

About *Fawley* they plough twice only for turnips, scarcely any hoeing; but some farmers harrow them: all are fed off with sheep. The first crop of their clover they mow for hay, and the second for seed; get a ton or a ton and a half of hay *per* acre: after this they feed it two years. Spring tares they cultivate for soiling horses; they begin to mow the end of *May* or the beginning of *June*; one good acre will feed four horses five weeks.

Some buck-wheat is sown, about a bushel and a half of seed *per* acre, for ploughing it on strong land at *Michaelmas*, and sowing upon it; but the husbandry is not common.

In the improvement of waste commons or forest land, they first grub the furz, thorns, &c. which, if a full crop of it, will

236 THE FARMER'S TOUR.

will cost 20s. an acre; they then plough it a foot deep in winter, with six or eight horses, or six oxen and three horses, after which they drag it and cross plough it; then they spread forty loads an acre of marle on it, and twenty loads an acre of *Portsmouth* dung. After this improvement they sow wheat, of which they get five quarters an acre, which single crop more than pays the whole expence: then wheat again three quarters an acre. After this, barley four quarters, and lastly oats three quarters; with those oats clover and ray-grass, and have it three years. Vile!

They have no folding of sheep, no paring and burning, nor use any lime at present; but they have plenty of marle, blue, yellow and red: it is a clayey marle, falls in water, and effervesces with acids; they lay forty loads an acre, but now only thirty-five in general, such as five horses can draw; it lasts twenty or thirty years; some farmers go three or four miles for it.

It was about thirty years ago, that lime began to be used as a manure. Mr. *Mitford's* father built a kiln to burn lime for that

that purpose, at a farm which he kept in his own hands, about eight miles from *Gilbury*. Lime however soon grew into disuse, its profit being supposed not to answer the expence. Chalk has since been tried with great success. A tenant of Mr. *Mitford*, two miles from his house, an *Isle of Wight* man, and one of the best farmers in this neighbourhood, has chalked his land at a great expence, and finds great profit from it. He could marle much cheaper, but would not suffer any marle on his grounds, on any account. His predecessor had under chalked a field, and, he says, it will be of no use to add more, till what is there is entirely worn out. The quantity was not sufficient to occasion any considerable fermentation in the soil, but sufficient to prevent an additional quantity from having that effect. It is further supposed, that chalk will have no effect on marled land, till the marle is entirely worn out; but some have imagined a difference in that respect, between the chalk, which comes from *Portsmouth*, near *Portsmouth*, and that which is sometimes brought hither
by

238 THE FARMER'S TOUR

by ships in ballast from *London*. Mr. *Mitford* has a memorandum of his father's, which says, that his tenant, who occupied this farm, and grew rich upon it, supposed marle to enrich land more than chalk; but he preferred chalked land, because it might be worked at all occasions, and with less strength: marled land, if at all clayey, becoming mortar with a little wet, and brick with a little sun. Marle continues to be much more used than chalk, because cheaper.

There are several circumstances in these notions, that deserve the attention of experimental enquirers, who have the opportunity of trial; but, as to chalk or marle not doing on land that has been under chalked, &c. must certainly be an error, as it contradicts the best practice of the marling counties.

Portsmouth dung, much of which is used in this country, is a noble opportunity for good husbandry: it is a compost, consisting of all sorts of manure, including the fullage of the streets, ashes, dung, &c. The price is 2s. a load at *Portsmouth*, and the freight is 1s. From *Southampton* the freight is
1s. 6d.

1s. 6d. a load, the sort and price the same. It is brought in floops of thirty or forty tons, which run up the rivers or creeks, so as to be unloaded into the farmer's carts. They lay thirty loads an acre, which last seven or eight years under their bad course of crops. It would be an advantage of the first rate to a thorough good farmer, to have such a fine command of excellent manure; for any quantity is to be had of it; 3s. a load, delivered on the farm, is very cheap. It would answer in a most uncommon manner, to throw a whole farm into the course of, 1. Turnips; 2. Barley; 3. Clover, two years; 4. Wheat. To manure all the turnips, and all the clover, *every* year with this compost, twelve loads an acre would be sufficient.

There is another circumstance in this tract of sea-coast, which might be of infinite service to all the farmers near it: it is the sea ouze and sea weed all along the coast, and up the rivers there is a vast bed of ouze turned quite black with rotten weed: it cuts up like a deep black and blue butter, and would prove of amazing use on any of these soils; but nobody
tries

240 THE FARMER'S TOUR

tries it, though I have not a doubt but it would prove far better than their marle: it is highly worth the trial. The sea-weed is also to be had in large quantities; but throughout this country there is a notion current, that it is worthless, from an impossibility of rotting it: but this is a mere absurdity; for if they would litter their yards with it, and mix it up with their dung, as is practised in the isle of *Thanet*, they would find it a most excellent manure. An old man here, says he once littered some fat hogs with it, and in that way it answered well: still this circumstance, so very material, has not been able to open their eyes. The ouze, weed, *Portsmouth* dung and marle, all together, render this a most eligible country for farming.

No draining is practised here, except by *Mr. Mitford*: their hedges are in the reparation all cut off to the ground; no plashing.

There is very little good grass land in this country; what they have is applied to cows: one acre they reckon sufficient to summer-feed a cow; but the breed is small, between the forest and the western. Three
gallons

gallons of milk the quantity *per* day, and 6 *lb.* of butter a week. *Alderney* cows are much liked here; the butter and milk are both better than common. Mrs. *Hooper*, of *Bewley*, has made 12 *lb.* of butter a week from one *Alderney*; and *William Sanfon* has one that is forced to be milked three times a day; but she is well fed: they are as hardy as the little forest cows. Cows in general are let at 3*l.* but they pay 5*l.* To ten cows they keep two breeding sows, and all the pigs they breed; but they have many acorns. A dairy-maid can take care of twenty.

Their swine they fatten to 30 score.

Very few sheep are kept here: they take them in from the downs to winter, at 3*s.* 6*d.* a head.

In their tillage, eight or nine horses are kept to an hundred acres of arable land, but about *Fawley* not more than six. They use here four in a plough, at that place three; do an acre a day, four or five inches deep; the price 6*s.* They cut straw into chaff; there are very few draft oxen used; their stubbles they plough up at *Christmas*; use only wheel-ploughs.

242 THE FARMER'S TOUR

In the hiring and stocking farms, they reckon 500*l.* necessary for 100*l.* a year.

Land sells at thirty years purchase.

The land-tax 2*s.* about *Lymington* 3*s.* 6*d.* and in the *Isle of Wight* from 2*s.* 6*d.* to 4*s.*

Tythes generally compounded, 4*s.* 6*d.* in the pound.

Poor rates 1*s.* 9*d.*: between thirty and forty years ago, 6*d.* was allowed an old man, in order to raise a rate, that they might not be charged in assistance to other parishes. The poor have no employment from manufactures; but they drink tea twice a day.

All the farmers have leases. The particulars of Mr. *Mitford's* farm are as follow,

130 Acres in all	6 Pease
8 Grass	7 Horses
118 Arable	12 Cows
4 Rough land	60 Sheep joisted
24 Acres wheat	4 Young cattle
16 Barley	10 Swine
18 Oats	2 Men
20 Clover	1 Boy
20 Fallow	2 Labourers,
6 Turnips	

THROUGH ENGLAND. 243

Another :

280 Acres in all	12 Horses
250 Arable	16 Cows
3 Grass	10 Young cattle
27 Rough ditto	20 Sheep, and
90 <i>l.</i> Rent	100 Joisted
35 Wheat	20 Swine
35 Barley	3 Men
35 Oats	1 Boy
105 Clover, &c.	2 Maids
35 Fallow	3 Labourers.

In Mr. *Mitford's* salt-pans I observed a machine for raising water up from one pan to another, which might be applied, I should apprehend with success, to emptying the collected water of drains or ponds. Plate XXV. Fig. 2, represents it.

From 1 to 2 ——— 1 foot 2 inches,

1 to 3 ——— 2 8

4 to 5 ——— 1 8

1 to 6 ——— 2 0

The front doors 8 inches square.

They have also small windmill pumps for raising water, which might be extremely useful for draining. See plate XXV. fig. 3.

From *Lymington* to *Christ-Church*, the soil improves much: it is a fine kindly

R 2

loam,

244 THE FARMER'S TOUR.

loam, excellent for corn, and lets at 17s. an acre. From thence to *Winborn* is yet better, lets at 20s. About *Christ-Church* they go eight and ten miles for chalk, and give 1s. a load for it; they lay four, five, or six loads an acre; they find it answers well, particularly in killing all weeds. From *Christ-Church* to *Ringwood* the soil is pretty good, but not equal to the preceding.

As I enter *Dorsetshire* next, I shall here conclude this letter, being, &c. &c.

Fig. 1.

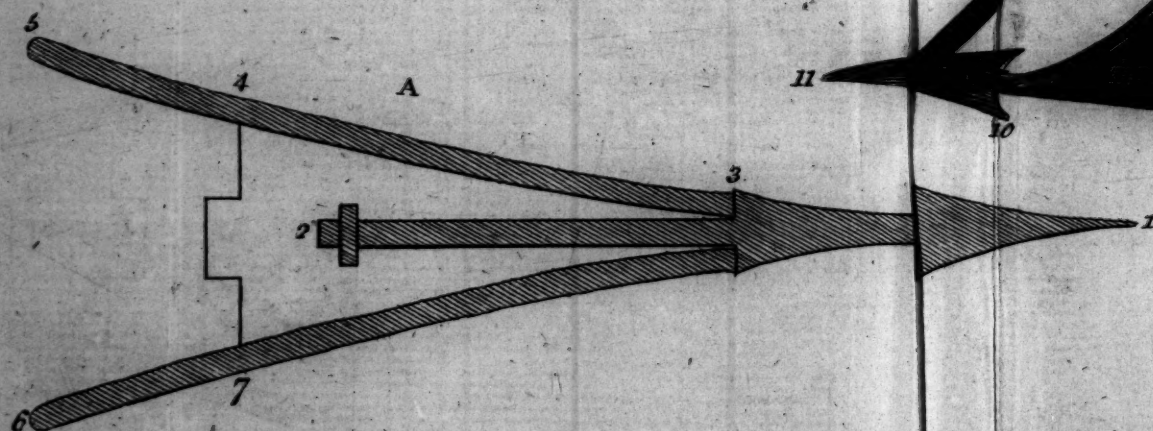
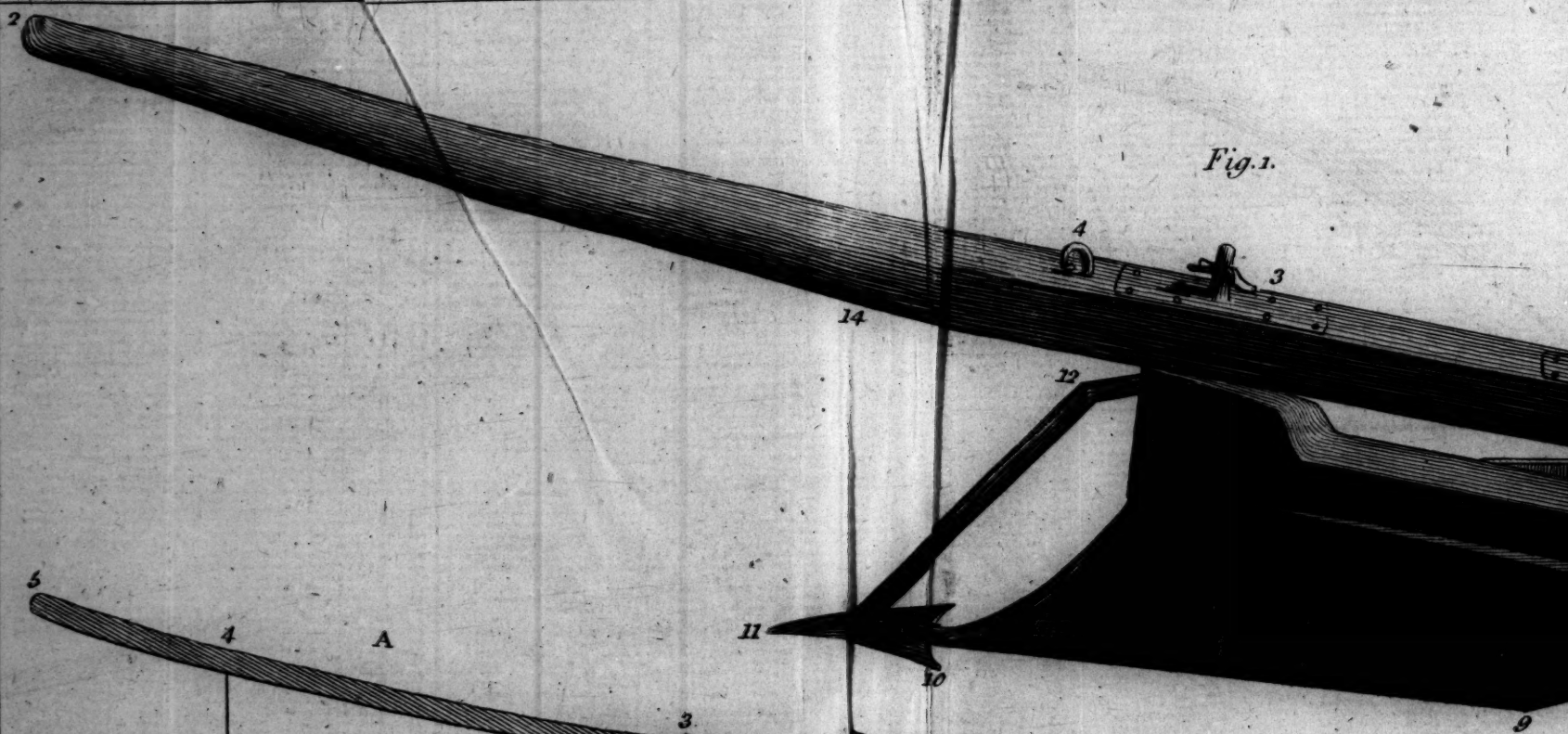
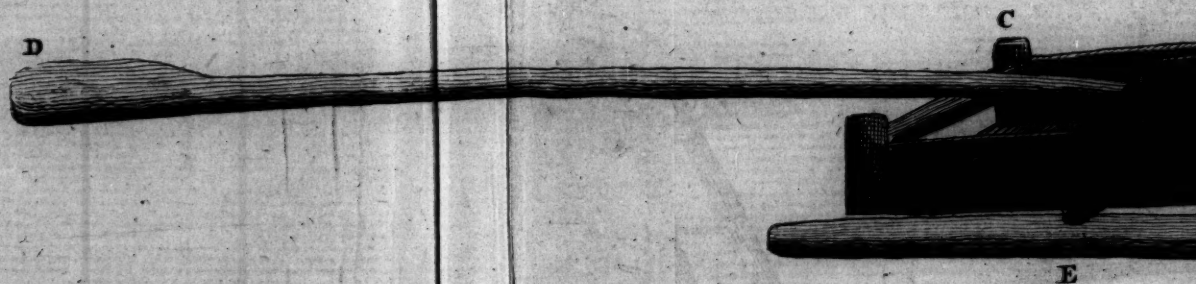
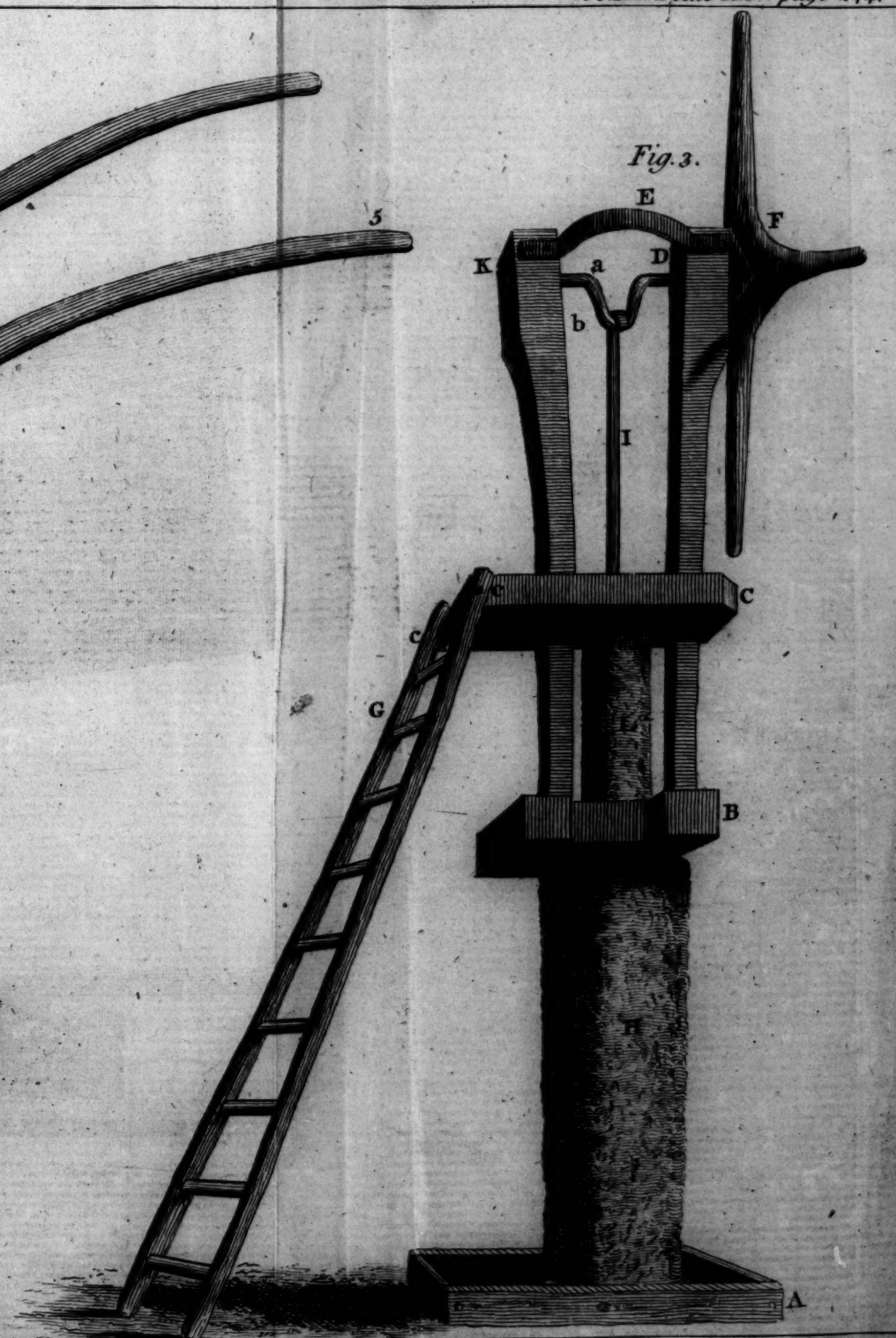
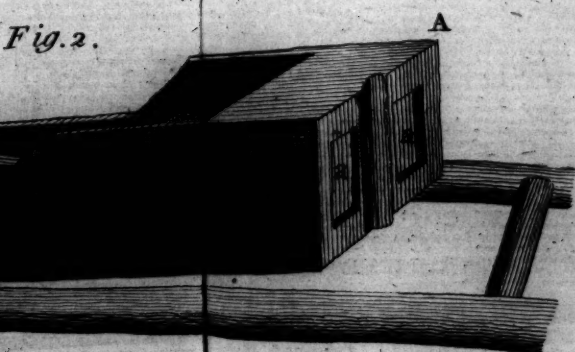
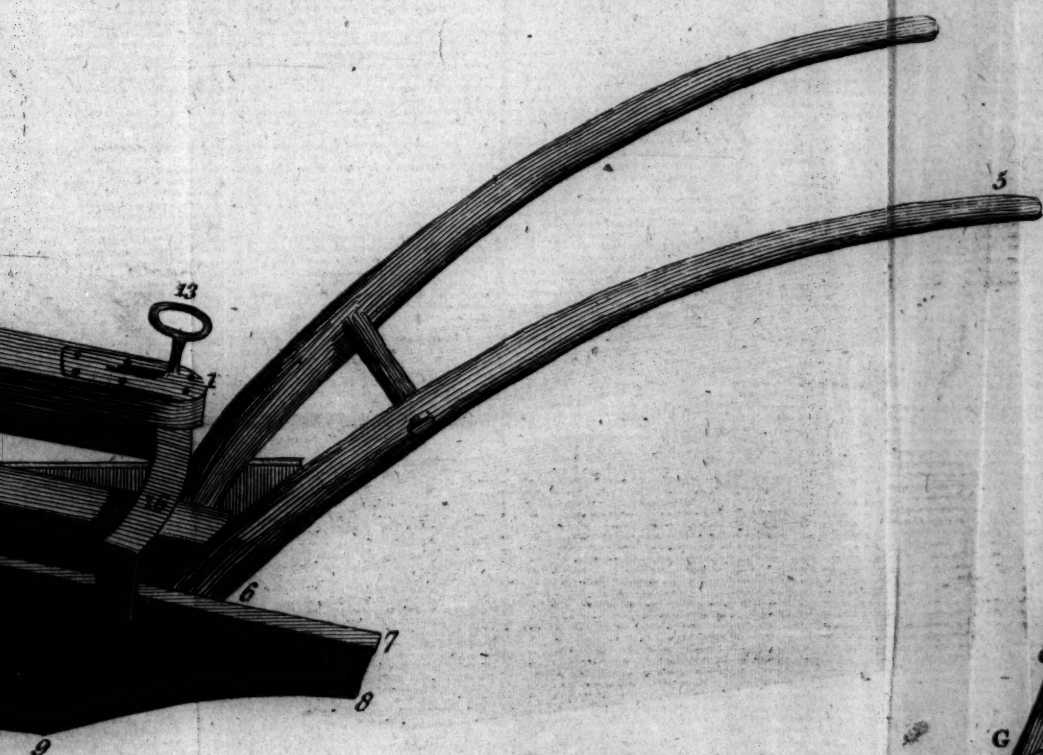


Fig. 2.



See Appendix for Vol. II & III.



L E T T E R XXVI.

FROM *Ringwood* towards *Critchill*, for several miles, I passed over an extensive common covered with furze, and fern; with some ling. It is from 1 to 2 feet deep, in a rich, black, peat soil; and under that, either sand, gravel, or a yellowish loam; most of it is excellent land, and would yield very fine crops of corn, clover, and turnips. It is much to be regretted that the proprietors of it do not exert a little spirit, to inclose and convert so rich a tract of waste into profitable farms.

For the following account of husbandry about *Critchill*, I am indebted to *Hum^r. Sturt, Esq.**

Farms are from 100*l.* to 400*l.* a year. The soil loam, gravel, chalk, and clay; lets on an average at 10*s.* an acre.

About *Winborn*, at 20*s.*

All *Dorsetshire*, conjectured at 8*s.*

R 3

The

* Member for the county of *Dorset*.

246 THE FARMER'S TOUR

The courses of crops general here, are;

- | | |
|------------------|------------|
| 1. Clover 1 year | 3. Barley |
| 2. Wheat | 4. Barley. |

Or,

- | | |
|-----------|-----------|
| 1. Clover | 3. Barley |
| 2. Wheat | 4. Oats. |

They plough but once for wheat; sow $3\frac{1}{2}$ bushels; the crop $2\frac{1}{2}$ or 3 quarters. For barley they plough twice; sow five bushels; and reckon the average produce at 3 quarters. For oats they stir but once; sow 6 bushels; the mean crop 4 quarters. A few turnips they sow in case the land is foul, now and then a single field instead of the second crop of barley; but the culture is absolutely contemptible, for they don't sow them unless the land is foul, and even then they do not hoe them: they are eat on the land by sheep; the average value 30*s.* *per* acre.

Clover they mow once for hay, and get 2 ton or $2\frac{1}{2}$ *per* acre—they mix the seed; 12*lb.* common clover with 2 bushels of hop and ray. They sow a few tares for soiling horses. Sainfoine a few farmers sow on some of the chalk hills; 6 bushels of seed *per* acre. The soil is a thin loam on chalk; but

THROUGH ENGLAND. 247

but it has done very well where there has been no chalk, or any strata to stop its roots. They mow it once: get 2 loads of hay from the unmanured fields; but from those that are dressed with ashes, more. Turf ashes do great things with it, and the winter fold of sheep also.

In respect to manuring, they fold their sheep during part of the winter as well as in summer. Towards *Lavington* in *Wiltshire* they fold their downs in winter, which has improved a mere open country so much, that it will carry dairies of cows. A wether fold they reckon much the best, because they can, with them, fold all the year through, which the ewes will not bear, and the land is the better after them, for, say these farmers, the wethers are the stronger, heartier sheep, that make more and better dung than the ewes. Lime is not at all used.

Chalk they spread on their lands, 20 loads an acre; it is a hard chalk; lasts 20 years. They know nothing of chopping their stubbles; but stack their hay at home, except what is for their sheep.

Plashing hedges is here practised.

248 THE FARMER'S TOUR

Good grass land lets from 20s. to 40s.; it is chiefly applied to the dairies; one acre will carry a cow through the summer: the breed, long horns; they give 4lb. of butter a week, from 2 or 3 gallons of milk a day. The dairies let at 3l. 12s. 6d. per cow, but the dairy-men have all the profit of the farm-yard; such as all the swine and the poultry: Was ever there such a ridiculous system known; to value their cows under such circumstances, at no more? This must greatly contract the profit of the most profitable animal that is kept; for if the farmer has not the benefit of his yard in winter, how is he to keep great herds of swine? What would a *Norfolk* farmer, who makes 2 or 300l. a year by swine, and yet not keep above 20 or 30 cows, say to so wretched a system of trifling! He would rank it with their turnip culture. To 10 cows the dairy-men keep 8 hogs; and reckon that a dairy-maid can take care of 15. In winter they are kept, while dry, on barley straw, and at calving, on some of the worst hay.

Their swine they fatten up from 10 to 20 score.

THROUGH ENGLAND. 249

Flocks of sheep rise from 100 to 1000; the profit, valued by lamb and wool, is 10s. 6d. a head; the winter food hay and grafs.

In their tillage they reckon 9 horses necessary for 250 acres of arable land; use from 2 to 4 in a plough; chiefly the latter; always a driver, and do 1 acre a day; 4 inches deep; the price 6s. or 7s. an acre. Some few farmers cut straw into chaff. They plough up their stubbles at *Christmas*; their ploughs have single wheels; and in stiff land, foul, they use 2 coulter.

In hiring and stocking farms, they reckon 2000*l.* necessary for 500*l.* a year.

Tythes are both gathered and compounded; the price 4s. an acre for corn, and 2s. for grafs.

The land-tax, at 4s. in the pound, is 1s. 3d.

Poor rates 2s. 6d.; 20 years ago 10d. They have a great deal of employment in spinning. Many of them drink tea thrice a day.

Most of the farmers have leases.

LABOUR.

In harvest, 30s. to 38s. a month and board.

In

250 THE FARMER'S TOUR

In hay-time and winter, 1*s*.

Reaping, 4*s*. 6*d*.

Mowing corn, 1*s*.

——— grass, 1*s*. 6*d*.

Head-man's wages, 8*l*. to 9*l*.

Next ditto, 4*l*. to 4*l*. 10*s*.

Lad's, 2*l*. 2*s*. to 3*l*.

Dairy-maid's, 3*l*. to 4*l*. 4*s*.

Other ditto, 30*s*. to 50*s*.

PROVISIONS.

Bread, - 2*d*. per lb.

Cheese, - 1 $\frac{1}{2}$

Butter, - 7 $\frac{1}{2}$ 18 oz.

Beef, - 3

Mutton, - 3 $\frac{1}{2}$

Veal, - 3

Pork, - 3

Bacon, - 6

Milk, - $\frac{1}{2}$ a quart.

Potatoes, - 5 $\frac{1}{2}$ a peck.

Labourer's house-rent, 1*l*. 10*s*. to 2*l*.

——— firing, 25*s*.

BUILDING.

Oak timber, 1*s*. 6*d*. a foot.

Ash ditto, 10*d*. to 1*s*.

Elm

THROUGH ENGLAND. 251

Elm ditto, 1 s.

Soft woods, 8 d.

Beech, 10 d. $\frac{1}{2}$.

The particulars of a farm are as follow :

900 Acres in all	5 Turnips
130 Grass	14 Wood
770 Arable	16 Horses
£. 450 Rent	50 Cows
90 Wheat	20 Young cattle
160 Barley	800 Sheep
60 Oats	70 Swine
20 Pease and beans	3 Men
160 Clover	2 Maids
60 Fallow	10 Labourers.

Another :

300 Acres in all	10 Oats
£. 150 Rent	40 Clover
17 Grass	5 Pease
25 Swampy moor	4 Vetches
42 Wheat	9 Horses.
80 Barley	

The great defect in this system of husbandry is the want of turnips for the sheep ; their downs are fine extensive sheep walks, which enable them to keep large flocks in summer ; but the want of turnips deducts not only from the number they might have
with

252 THE FARMER'S TOUR

with better management, but also from the profit. An improved turnip culture, would, at the same time, correct the vile course of crops pursued by these farmers.

Mr. *Sturt* has practised agriculture himself, with a view to improve the husbandry of his numerous tenants: among other objects he has attended to the following.

Experiment, No. 1.

The extensive downs, in the neighbourhood of *Critchill*, are fine land for sainfoine; but the farmers have practised that part of husbandry on a very contracted plan; liking better to leave them for sheep-walks. Mr. *Sturt* sowed many acres to decide the value of it; and he found the crops 3 tons of hay per acre: which are a produce far beyond any thing to be gained by sheep: such a crop must be worth from 5 *l.* to 6 *l.* besides the after-grass; and this on land of not 2 *s.* 6 *d.* an acre. He tried ashes on some old, and almost worn out, sainfoine; and they were attended with the remarkable effect of bringing a crop of 3 ton of hay per acre.

Experiment, No. 2.

Lucerne Mr. *Sturt* tried very fairly on no less than 12 acres of land during 12 years. It was sown in drills equally distant, 18 inches asunder; and kept perfectly clean from weeds by a horse-hoe of his own invention, which saved a vast expence of hand-hoeing. It was cut from 3 to 5 times every season; several horses, some cows, and young cattle were fed on it green, and it yielded some sheep feed also; besides these articles it was made into hay; and during 8 or 9 years, yielded from 24 to 36 loads of excellent hay; from whence we may suppose it about $2\frac{1}{2}$ loads on an average; $\frac{1}{2}$ a load more may be allowed for the green food; which will make the annual produce 3 tons of hay *per* acre. Now lucerne hay is well known to be the best in the world; 3 *l.* a ton is not an extravagant price for it; and this makes the product 9 *l.* *per* acre. The soil was a strong loam, 18 inches deep, on chalk; but the lucerne was best where the loam was the most shallow.

254 THE FARMER'S TOUR

Experiment, No. 3.

Buck-wheat this gentleman has introduced with very great success; he sows a bushel an acre, and reaps a crop of 5 quarters: he has found it excellent in destroying black grass; and the grain is exceedingly good for pigs, fowls, and dogs. It sells from 20 s. to 26 s. a quarter.—He has also tried the ploughing it in as a manure for wheat; in which way it beat any other preparation.

Experiment, No. 4.

In *April*, 1770, Mr. *Sturt's* bailiff represented to him, that the rabbits from an adjoining waste had totally destroyed a large field of wheat; they had eaten down every blade, infomuch that the land was as bare as a fallow. He ordered it to be manured with pigeons dung, and left to take its chance: the bailiff remonstrated against this, and asserted that the crop was quite ruined; but his master persisting in his directions, it was done; and 20 bushels *per* acre sown over it. The event was, that the crop turned out extremely good; equal, if not better than any on the farm.

THROUGH ENGLAND. 255

Experiment, No. 5.

In planting, at *Critchill*, Mr. *Sturt* tried the larch; he formed a plantation of it on a very thin loam, on chalk, in rows 9 feet by 7. They were set 6 years ago, being then 4 years old. Average value 1 s.

At that distance an acre contains 680 trees, which at 1 s.

are, - - - £.34 0 0

Deduct—raising,

planting, &c. 3 0 0

6 Years rent,

at 5 s. — I 10 0

Reparations

of fences, 0 10 0

5 0 0

Profit,	-	-	29	0	0
---------	---	---	----	---	---

29 0 0

Or *per ann.* - 4 16 8

4 16 8

A vast annual product for so short a term as 6 years: What an amazing profit will have attended these trees at 20 years growth!

Experiment, No. 6.

Four acres of a low rich foil, worth 20 s. an acre, were planted 31 years ago with *Scotch,*

256 THE FARMER'S TOUR

Scotch, and yew leaved firs. Six hundred pounds worth have now been cut in it; and the remaining trees valued at 1200 *l*. Total growth in 31 years 1800 *l*.

Product, - - - *l*. 1800 0 0

Expences. Raifing

and plant-

ing, &c. 12 0 0

Rent, 124 0 0

Repara-

tion of

fences, 6 0 0

142 0 0

Remains profit, - 1658 0 0

Or *per* acre, - 414 0 0

Which is *per ann.* - 13 18 0

Which is a strong fresh proof of the great profit of planting even the richest soils. *

But

* Mr. *Sturt* has just finished building a very magnificent house at *Critebill*, by making a vast addition to the former one, built about 20 years ago; but the new edifice nearly surrounds it. Great additions to old houses seldom form complete ones:

But the most remarkable improvement effected by this gentleman, has been on the island of *Brownsea*, near *Poole*: it consists of above 900 acres of land, quite wild, and over-run with fern, furze, and much ling; it was esteemed so very poor, and little worth, that it was with difficulty let to a butcher at *Poole* for 16*l.* a year; the only use he made of it, was to turn on a few lean sheep now and then: In this state
Mr.

ones; but Mr. *Sturt* (who is his own architect) has contrived it so uncommonly well, that the whole will unite to form a noble house.

The building is a square of 125 feet; having four regular fronts: the two principal ones are extremely light and elegant. In the center of the south front, 14 steps lead to a very spacious portico of 57 feet by 26. The columns of the *Ionic* order 24 feet high. In the east front also, 14 steps lead to a parade of 44 feet in the center. Here you enter a hall 30 feet square, and 25 high, which opens to the right into the great dining room, of 45 by 30, and 20 high with a cove of 5; opposite the door is to be a glass which Mr. *Sturt* has procured from *France*, and is the largest yet brought to *England*; being a single plate 10 feet long by 5 broad.— On the other side, the hall opens into the drawing-room of the same dimensions as the dining room.

258 THE FARMER'S TOUR

Mr. *Sturt* purchased it, and immediately set about the improvement with great spirit, and equal judgment. Besides building the castle, &c. described in the note, he planted all the sides of the hills with various sorts of firs, to the number of 1 million; these thrive well; some of the plantations are 4 or 5 years old; the vacancies by failure, which were very few, have been supplied; and all are in the most promising condition.

The

In front of the entrance into the hall (divided from it by double columns and pilasters) is a second hall, or a vestibule, of 23 by 22, opening in an arch to the principal stair case.

This vestibule opens on one side into a bed-chamber 24 by 20, and 13 high; that into a dressing room of 30 by 18; (which also opens into the area before the stair-case) here are Mr. *Humphry Sturt*, jun. in a scene of rocks with a large dog, by *Zaffany*; extremely well done. Also two Miss *Sturts*, by Miss *Reed*; the attitudes are very easy and pleasing, and the colours good, but the hands badly executed.—A large piece of birds; good. The relief strong.—Two pieces of fish, and dead game; same: Fine, and naturally done. They are by an *Italian* master; but the idea of plucking his game for a disagreeable, though minute, expression, was truly *Dutch*.—Horses by *Seymour*; fine.

This

THROUGH ENGLAND. 259

The vales and flat lands are improving by degrees: 50 acres are laid to white clover and hay seeds, that shew how well the land will do for pasture and meadow. The soil is, in general, a black, moory, peat earth, on various strata; either sand, gravel, or loam; but the new laid fields do equally well on all; which shews that the black soil itself is sufficiently good for the purpose.

The

This dressing room opens into the library, 36 by 29, and 20 high, with a cove of 5.

The other side of the vestibule opens into a bed-chamber, 24 by 20; that into a dressing-room, 30 by 18; at the end of which is a recess 12 feet deep, which opens into the common dining parlour, of 36 by 24, and 18 high, with a cove of 6.

Over the portico is a rendezvous room, of 56 by 26, and 18 high; and a gallery in the east side, of 120 feet, which leads to the bed-chambers.

The environs of the house are fine. It stands on the side of a hill which falls to a winding vale that is partly floated, and is to be entirely so, in the midst of a park nobly wooded. Finer timber is seldom to be viewed; and what is remarkable of all sorts of trees, it is not only the oak and elm that are great; but ash, walnut, hickory, and even cherry-trees grow to an uncommon size;

260 THE FARMER'S TOUR

The grafs annually improves, for the lays, 4 or 5 years old, are better than the others; and yet all are excellent. This year's I viewed particularly; and never have seen finer clover; thicker, more luxuriant, or that promised better to be most profitable land. The whole Mr. *Sturt* has laid, is extremely well worth 20s. an acre: I said so to the bailiff, and he agreed with me; adding, that he would himself give that rent for all the grafs.

and as the ground is finely waved into inequalities, these stately trees are exhibited in full perfection. The adjoining country is various and beautiful; and in the proposed enlargement of the park, will unite with it to form, on the whole, a beautiful place.

But *Critchill*, considerable as it is, is not the only object that has possessed Mr. *Sturt*'s attention: the isle of *Brownsea* has been at the same time embellished with every thing that can render it agreeable. This spot deserves particular attention from all who amuse themselves with viewing the numerous marks of taste and wealth that ornament their country. It is an island of about 900 acres of land, in the midst of 20,000 of water, which is *Poole* harbour; a more peculiar spot can hardly be conceived. The high lands of the isle of *Purbeck*, and other tracts about *Poole*, &c. surround this whole space, and land-

lock

Experiment, No. 7.

The method that has been chiefly followed in conducting the improvement is this. First, the heath, &c. is burnt; and then the land ploughed; after which it is cross ploughed, and the roots picked and burnt; and then the land well harrowed; upon this 15 loads *per* acre of chalk are spread on some parts; and on others as much of *Portsmouth* dung: on this manur-

ing

lock it on every side. Can any thing be finer than such an island so gloriously situated!

The coasts hang in very bold steeps; all which, Mr. *Sturt* has planted throughout the island, to the quantity of a million of trees of various sorts, chiefly firs; so that the hills will all be wood, and the vales, lawn. One end of the island lies directly against the narrow mouth of the harbour; on this point he has built a beautiful edifice, which he calls *Brownsea* castle; it is a quadrangular building in that stile; rising each story in the center, till it finishes at last in a flag. It is light, and admirably suited to the spot. It consists of a hall 24 feet square; with a dining-room on one side, 24 by 16; and a drawing-room on the other, of the same dimensions, with two bed-chambers; very conveniently contrived. The attic consists of a room in the shape of a cross; each 50 feet long; the corner squares of which, form three bed-chambers

262 THE FARMER'S TOUR

ing turnips are sown, and fed on the land by sheep; after the turnips, barley is sown; the crop 4 quarters *per* acre; with that, white clover, red clover, and trefoile. This is mown for hay, and yields $1\frac{1}{2}$ ton *per* acre. It is then left for permanent pasture, and annually improves.

Experiment, No. 8.

Another method that has been followed, is, to burn, plough, and sow turnips as before,

and a stair-case; and over that a large billiard room, with book-cases, &c. But the views commanded from the windows of these rooms are inimitable; they look out to sea through the narrow streight, the harbour's mouth; which is just such a view of the ocean as is desirable; you there catch the *Needles* and the isle of *Wight* mountains at a distance: but the circumstance, truly picturesque, is the shipping; every sail that comes to or from *Poole* (a place of great trade) bends her course in a line up to the castle, and then tacks through a channel half a mile broad, under the very windows: Nothing can be finer than this while the surrounding coasts are bold.—In front is a battery of ten 9 pounders, with other smaller guns for salutes.

The kitchen garden is close to the castle, surrounded by a parapet wall with port holes, and flanked

THROUGH ENGLAND. 263

fore; and feed them off time enough for wheat; the crops have been 3 and $3\frac{1}{2}$ quarters *per* acre. After the wheat it is well ploughed, and sown to barley and the seeds; and then left for grass. Three tillage crops have been found, throughout the improvements, sufficient totally and effectually to destroy all the spontaneous growth.

Experiment, No. 9.

Last summer two acres were sown with buck-wheat; which was mown green for the
draft

flanked at the angles by turrets; at one end a large green-house between two hot-houses.

Near the castle is a little quay, &c. where Mr. *Sturt*'s barges, sloops, &c. lay at anchor: there is business enough to add to the variety of the picture.

Sailing around the island it offers several very beautiful views; the castle is a noble object; and being built of white stone, a cheerful one. The lawns, which Mr. *Sturt* has laid to grass, with a few scattered groves of tall trees with a farm, and a cottage or two under them, backed by rising grounds, all spread with young plantations, are as agreeable landscapes as can any where be seen; and when the woods all get up, the whole will be a glorious scenery.

In respect to the agreeableness of residence;
S 4 nothing

264 THE FARMER'S TOUR

draft oxen: it kept 8 of them 6 weeks; which cannot be estimated at less than 3*l.* *per* acre.

Experiment, No. 10.

An acre and half of this black land were planted with potatoes for a trial; the effect uncommonly great; they yielded 600 bushels *per* acre; which at the *Poole* price, of 2*s.* a bushel, is 60*l.* *per* acre.

nothing can exceed this island: the sea about it abounds with the finest fish in *England*, and in the greatest plenty; the island itself, from the improvements making on it, will furnish all that land can do. It is full of hares, pheasants, and partridges, none of which can escape. A very fine decoy is making for wild duck, teal, &c. which now flock here in great abundance, and the springs of fresh water are as fine as can any where be met with. When all these circumstances are considered, with the amusement of sailing, fishing, &c. that it is within three miles of *Poole*—and so truly singular, that no other spot in *England* resembles it; will any one hesitate to pronounce it one of the most agreeable places in the kingdom? Will any one fail to be astonished when they hear that this beautiful spot was long neglected and despised, and would yet have been a desert, had it not been purchased by Mr. *Sturt*!

THROUGH ENGLAND. 265

Experiment, No. 11.

Carrots Mr. *Sturt* tried here on a piece of very poor running sand; they turned out a very good crop, so that it was evident the soil would do for them.

Another plan for improving the island, which he intends to execute on a large scale, is to buy oil-cake at *Bridport*, where it is had at 50*s.* per ton; bring it by sea to *Brownsea*; there fat oxen with it for the *London* market. This will raise large quantities of excellent dung, at a cheap rate, besides the profit on the fattening.

The business of these noble improvements is carried on to very great advantage by means of water carriage. Mr. *Sturt* has built two sloops, one of 40, and the other of 80 tons; these are regularly manned, and constantly employed in bringing manure from *Portsmouth*; and lime-stone, chalk, and coals, from other parts; which are advantages of the most striking kind. They shew with how much spirit this gentleman prosecutes his improvements.

He has also several barges, which are constantly employed in bringing manure from *Poole*.

266 THE FARMER'S TOUR

Experiment, No. 12.

He brought 80 tons of soap-ashes from *London*, which were spread on the land; but without being of the least utility.

This system of keeping sloops, &c. regularly employed in the improvement of the island, is an admirable one, and cannot possibly fail of paying a noble interest for every shilling expended; manuring in that manner, is performed at a much less expence than when a land carriage is necessary: it answers greatly in the latter case; what profit must therefore attend it in the other!

Brick-earth is found in great plenty on the island; and the ling and furze that are cut up, to make way for the improvement, burns it; this is a very great advantage. He likewise digs peat to heat his stoves, &c. with. In short, there is no production which tends to render a country profitable, agreeable, or convenient, but what is found in great plenty on this happy island; which really is *England* in miniature.

Potatoes, 600 bushels.

Buck-wheat, 3 l.

White clover hay, 1 $\frac{1}{2}$ ton.

Wheat, $3 \frac{1}{2}$ quarters.

Barley, 4 quarters.

Carrots, fine crops.

These are the products of this black, wild waste, and reputedly *poor* land, which went a begging at $4d. \frac{1}{2}$ an acre rent; and was purchased, 900 acres, for less than 600*l.* fee-simple! The vast profit attending such improvements must be striking to every one. But let us form a slight calculation.

Expences, for 30 years.

400 Acres plantation, raising,
planting, &c. at 20*s.* £.400 0 0

N. B. The expence of inclo-
sures (the greatest article) is
here very trifling, as most
of them unite.

Reparations, &c. - 50 0 0

30 Years interest of 600*l.* at 5

per cent. - 900 0 0

1350 0 0

Produce.

The average produce of Mr.

Mitford's fir plantations,

in 30 years, is 4*s.* 3*d.* a

tree; there is no reason

268 THE FARMER'S TOUR

for calculating these; at
 less, as the soil is much
 better; but suppose the
 value then is 4s.; it is
 in 30 years, - 200,000 0 0
 30 Years rent of 500 acres,
 at 20s. which is the va-
 lue, but suppose only 15s. 11,250 0 0

Total,	-	211,250	0	0
Expences,	-	1,350	0	0
Profit,	-	209,900	0	0

I am very sensible that many of my readers will think this calculation exaggerated; but nothing is farther from fact. As to the rent it will bear no dispute; whoever views the improved land attentively, will be sensible of this; and it is equally certain, that the products pay the whole expence of improving with profit. The value of the plantations, is mere matter of calculation; it is the average value of several plantations of a gentleman in the neighbourhood, on poorer soils. Many other woods in other parts of the kingdom, registred in this Tour, would make the total far more. If 30 years are thought

THROUGH ENGLAND. 269

too distant a period, let me calculate a shorter. The average of Mr. Mitford's firs, of 18 years, is 2*s.* value.

At that rate, 1,000,000 of

trees come to,	-	£. 100,000	0	0
18 Years rent of 500 acres,				
at 15 <i>s.</i>	-	6,750	0	0
		106,750	0	0

Expences.

Plantations,	-	450	0	0
18 Years interest of 600 <i>l.</i>		540	0	0
		990	0	0

Product,	-	106,750	0	0
Expences,	-	990	0	0

Profit,	-	105,760	0	0

Which is <i>per</i> acre,		117	0	0

Or <i>per ann.</i>	-	5,876	0	0

And <i>per acre per ann.</i>		6	10	0

It would make a man smile, who viewed this island 6 years ago, to hear the income of it rated at near 7000*l.* a year : but such things

270 THE FARMER'S TOUR

things being esteemed impossible, will not make them so. The true spirit of planting is new; we have scarcely had an instance given of the real profit of it before the present age. One would think the facts could not exist from the silence of authors concerning instances. I again repeat that these are not mere calculations—since the facts from which they are drawn, are clear, decisive: and in no instance exaggerated.—But suppose objections are made to the *data*; let them be squared to the ideas of those who dispute their propriety; and then calculate again; they will yet find the profit so very great, that almost the same observations will remain applicable.

The public utility of such noble improvements, is too plain to require elucidation:—they are of the most beneficial kind; for every blade of grass, every grain of corn, every foot of timber here raised, is a creation. The whole was, lately, a black desert; but it will soon smile with every plenteous blessing that can crown fertility, at the same time, that one of the most singularly beautiful places in the kingdom will arise, where not a fishing hut was before.

L E T T E R XXVII.

I N the road from *Critchill* * to *Poole*, the last four miles are over a black common, quite waste, but consisting of excellent land; I examined it several times with attention, and am convinced that it might all, at a small expence, be made most profitable farms. About two miles and an half

* A few miles from this place is *Eastbury*, one of the seats of earl *Temple*; now the residence of Mr. *James Grenville*; built by sir *John Vanbrugh*. The front is in the heavy clutter'd stile of that architect; and the size of the wings, which are offices, beyond all proportion to the house. The entrance under a very heavy portico is into the hall, a double cube of 30 feet; a very fine room, and handsomely fitted up in white ornaments. It opens into the saloon, of 60 by 27; fitted up with richly carved and gilt ornaments, on an olive coloured ground; the cieling in the compartments gilt and coved! the cove struck with small squares and octagons. The chimney pieces are handsome. On one side it opens into a little drawing-room, 26 by 21; the cieling of which, also, is in the compartment and gilt.

272 THE FARMER'S TOUR

half from the town, are some inclosures, near several cottages, that have been taken from it; these are excellent meadow land, and prove sufficiently what the rest might be made.

The first six or seven miles also from *Poole* to *Blandford* consist of the same lands in the same state: What pity that such extensive wastes should remain in so desolate a condition; cut every way by turnpike roads, and within a few miles of a sea port of great trade! Every cause conspires to render

gilt. Then into the dining-room, 36 by 42; light, lead coloured ground with gilt pannels, ornaments, door-cales, &c. the cieling painted in divisions. The whole very elegant. At the other end of the saloon is the principal apartment; first, a drawing-room, 26 by 21; the cieling in compartments, but very heavy. Here are some good pictures. A large cattle piece. A piece representing figures in a cave with cows; which is fine. Several landscapes that are pleasing. Some dutch pieces; sea pieces, &c. Next a dressing room, 25 by 22; the chimney-piece and ornaments neat and light: here is a picture of, I believe, the queen of *Scots*; which is a good one; and several landscapes in an uncommon brilliant stile; but not in nature. This opens into the bed-chamber, 30 by 25, with several landscapes by the same hand.

render the improvement of these lands a work of uncommon profit, and yet none are undertaken; though I was told, that large tracts are absolute property, without any right of commonage over them.

I was unfortunate in not meeting Mr. *Drax* at *Charborough*, otherwise I should have been able to have given a particular account of husbandry in that neighbourhood. Their course of crops is,

1. Wheat.
2. Barley.
3. Clover three years; one year mown, and two fed.

Wheat yields from $1\frac{1}{2}$ to $2\frac{1}{2}$ quarters *per* acre; barley 3 quarters. These are the crops of the small inclosed farms; in the larger ones they have likewise other courses:

- | | |
|-------------------|--------------------|
| 1. Wheat | 4. Clover, 1, 2 or |
| 2. Barley | 3 years. |
| 3. Barley or oats | |

The inclosed lands let at 20s. an acre, tythe free; but the downs are given into the bargain. The products are,

Wheat $2\frac{1}{2}$ to 4 quarters.

274 THE FARMER'S TOUR

Barley $2\frac{1}{2}$ to 5.

Oats 4 to 5.

The farms about *Charborough* are in general 2 or 300*l.* a year; flocks of sheep are 4 or 500; they pay,

Lamb, *£*. 0 9 0

Wool, - 0 2 0

Total, - 0 11 0

Wethers they fold all the year; but ewes not in winter: they all plough here with four horses and a driver, and do one acre a day.

Mr. *Drax* sows many turnips, and hand-hoes them; but he is followed by very few of the farmers.

The last four or five miles to *Wareham* are all black commons, such as I mentioned near *Poole*: they belong all to Mr. *Drax*, and are as improveable as any lands I have seen. Great will be the profit of those who undertake the work.

From *Wareham* towards *Morston* the country is all the same; vast tracts of waste land that call aloud for improvement; immense quantities of which I was informed

THROUGH ENGLAND. 275

formed might be had at 1s. an acre rent, on long improving leases. What fortunes are here to be made by spirited improvers!

For the following account of the common husbandry around *Moreton*, the seat of *William Frampton*, Esq. I am indebted to that gentleman.

Farms rise from 40*l.* to 700*l.* a year; but are in general about 250*l.*

The soil is a loam, on red or black gravel; lets from 5*s.* to 40*s.* the average 12*s.* It is very observable, that the inclosed farms here let 80 years ago at a higher rent than at present: this is owing to so considerable a part of the country being watered meadows, the product of which (hay) sold then at a much higher price, than since clover and sainfoin have rivalled it. It is evident in every field, that all the enclosures have been gained from the vast tract of waste, over part of which I came; the colour and the soil itself are the same, only improved. The general course of crops is,

- | | |
|-----------|--------------------|
| 1. Wheat | 4. Clover and ray- |
| 2. Barley | grass 2 years. |
| 3. Barley | |

T 2

And

276 THE FARMER'S TOUR

And in one field in a large farm they will have,

- | | |
|------------|--------------------|
| 1. Wheat | 4. Clover and ray- |
| 2. Turnips | grafs. |
| 3. Barley | |

And it is to be hoped, that this single field will by and by absorb the whole farm; for the other course is a most vile one. All the return the land gets for three successive crops of white corn, is to lie to clover and ray, which, so managed, must be full of twitch grafs, and all sorts of trumpery.

For wheat they plough once, sow three bushels, and get two or two quarters and a half in return. On their thinnest land they sow some rye on one earth, sow two bushels, and get one quarter and a half. For barley they stir thrice, sow four bushels, the crop four quarters the first, and two and a half the second: a strong proof of the tendency of successive crops. They give but one earth for oats, sow four bushels, the crop three quarters. When they sow pease, they plough once for them, use four bushels seed of the *Marlbro'* greys, or two and a half of the white; never hoe them; the crop two quarters. For turnips they
plough

plough thrice; scarcely any hoeing; feed them all off with sheep; the value 40s. an acre.

Their artificial grass husbandry is rather that of ray-grass than clover, sowing a much greater proportion of it: they mow it the first year for hay, get one or one ton and a quarter, and afterwards feed it.

Winter tares they sow to eat off green by sheep, beginning them the end of *May*.

In their manuring they depend chiefly on the fold; wethers all the year; in winter on the lands for barley: but their ewes only in summer; at which season they reckon an ewe fold the best. They reckon that 100 wethers will fold ten acres twice in a place. They do not keep the sheep two nights together in the same fold, but come over it again. This I should think a very bad practice; for half the virtue of manuring lies in the fermentation raised in the soil, by the application of *large quantities at once*.

They use some chalk on new lands; lay 24 cart loads an acre.

No chopping of stubbles, and most of

278 THE FARMER'S TOUR

the hay stacked about the fields for *the cattle*. This is a wretched system; but I should observe, that Mr. *Frampton* has endeavoured with great propriety to check this evil practice, by building to many of his farms very complete cow-houses, in regular stalls, with racks, and contrivances to give them their hay from behind, where the hay-stacks for that purpose are made. This is most excellent management, saves the fields from being trodden and poached in winter, and raises a vast quantity of manure. What a most useful system this would be if the wheat stubbles were all chopped, raked, and stacked against these houses, to ensure the greatest plenty of litter!

Ashes they use with success for their meadows.

Plashing hedges is practised.

There are few tracts of good grass land, but watered meadows; their rent is 30s. for the two first crops: these are, first a crop of spring feed, and then one of hay, the product a ton and half; and, if not fed in the spring, two tons.

The breed of cattle long horns: the
cows

THROUGH ENGLAND. 279

cows give from 3 to 7*lb.* of butter in a week. They are let at 3*l.* 3*s.* to 4*l.*; total product 5*l.* 5*s.* or 6*l.* Two or three fows are kept, and the pigs bred by them, to 40 cows. They reckon a dairy-maid can take care of ten or twelve cows; the winter food in general is hay in the fields, and straw when dry: they reckon to each cow one acre of hay, and half an acre of barley straw. Calves for rearing suck from 8 to 12 weeks: this is strangely preposterous.

Swine fatten from five to twenty score; flocks of sheep rise from 500 to 1000.

The profit reckoned by lamb and wool is,

Lamb,	-	£. 0 8 0
Wool,	-	0 2 0
Total,	-	0 10 0

And the fold of a ewe they reckon at 1*s.* which is very little: the winter food is grafs and hay. Five hundred sheep require 200 acres of grafs for their summer food, and 20 tons of hay for that of winter: their fleeces are about 3*lb.*

In tillage they reckon five horses necessary for 100 acres of arable land; use three or four in a plough, and do an acre a day;

280 THE FARMER'S TOUR

the depth four inches, and the price 5s. an acre. The expence of a horse they reckon,

Keeping,	£. 7 0 0
Shoeing,	0 8 0
Decline of value,	7 12 0
Total,	<u>15 0 0</u>

They know nothing of cutting straw into chaff.

They use single wheel ploughs. In the hiring and stocking farms, they calculate 1200l. or 1300l. necessary for one of 300l. a year, which sum they divide thus:

12 Horses,	£. 100
60 Cows,	200
50 Young cattle,	150
200 Sheep,	150
Swine,	5
Harnes,	12
3 Waggon,	60
3 Carts,	27
3 Ploughs,	3
6 Harrows,	4
1 Drag,	2
Rollers,	3
Carry over,	<u>716</u>

THROUGH ENGLAND. 281

Brought over,	£ 716
Sundry implements,	20
Half a year's rent,	118
Tythe and town charges,	20
Furniture,	150
Seed wheat, 40 acres,	30
Barley, 60,	30
Oats, 30,	15
Clover, 40,	16
House-keeping,	40
Wages,	20
6 Labourers,	100
Total,	1275

Land sells at 30 years purchase; land-tax at 4s. is 2s.

Tythes both gathered and compounded; if the latter, 3s. in the pound.

Poor rates 1s.; 20 years ago 6d.; employment spinning and knitting: all drink tea.

The farmers all have leases; they carry their corn six or seven miles.

LABOUR,

In harvest, 2s. and beer,

In hay-time, 1s. and ditto,

In

282 THE FARMER'S TOUR

In winter, 1 s.
 Reaping, 5 s.
 Mowing corn, 1 s.
 ——— Grass, 1 s. 8 d.
 Planting a hedge; the ditch, and making
 two dead hedges, 1 s. 3 d.; value of the
 wood 4 d. more; the dead hedge must
 be twice renewed to rear the quick.
 Head-man's wages, 8 l. 8 s.
 Next ditto, 5 l. 5 s.
 Lad's, 3 l.
 Dairy-maid's, 3 l.
 Other ditto, 2 l. 10 s.
 Rise of labour in 20 years one sixth.

PROVISIONS.

Bread, 1 d. $\frac{1}{2}$ per lb.
 Cheese, 2
 Butter, 7 for 18 oz.
 Beef, 3 $\frac{1}{2}$
 Mutton, 3 $\frac{1}{2}$
 Veal, 2 $\frac{1}{2}$
 Pork, 3
 Bacon, 7
 Milk per pint, $\frac{1}{2}$ d.
 Labourer's house-rent, 1 l. 10 s.
 Their firing from the commons,

THROUGH ENGLAND. 283

Particulars of a farm.

1000 Acres	60 Cows
400 Waste heath	40 Young cattle
224 Grass	300 Sheep
76 Woods	10 Horses
296 Arable	5 Men
260 $\frac{1}{2}$ Rent. N. B.	2 Boys

The 400 waste, 2 Maids,
and 76 wood, 6 Labourers.
are reckoned
only at 20 $\frac{1}{2}$ rent.

Mr. *Frampton* is himself a considerable farmer, which will appear from the following particulars of his farm.

800 Acres in all	100 Clover and ray
202 Watered meadows	30 Turnips
	8 Horses
160 Meadow and pastures	60 Cows
	40 Young cattle
268 Arable	500 Sheep
170 Plantations	6 Sows
400 $\frac{1}{2}$ Rent	3 Men
40 Wheat	1 Boy
80 Barley	8 Labourers.
20 Oats	

The particular in which he is most curious is the watered meadows. It appears
from

284 THE FARMER'S TOUR

from ancient records of the estate, that these rich tracts were once black bogs, reclaimed by watering: in this state they have been for many years: 120 years ago they let at 40 s. an acre for the mowing alone; but now at only 30 s. an acre.

Their whole value is quite artificial; they begin to water the first autumnal rains: all they can throw over the land before *Christmas* they reckon the best, from the washing new-dunged fields, &c. They observe to lay it as thin under water as possible, so that the field retains its green colour: they leave it thus for three weeks or a month, and then draw it off, keeping the field dry for a month. After this they water it again several times during the rest of the winter: they begin to feed them with sheep at *Candlemas*, and continue it till *May-days*: at that time they water for about a week or ten days, after which they are left for hay; the crop 1½ or 2 tons. Immediately on clearing the field, the water is let on to it again for a week, which brings a growth for feeding, worth 10 s. an acre.

The hay from these meadows is coarser than

than from up-land pastures; but it is worth from 25s. to 30s. a ton dry: yet it is asserted, that horses prefer it to the best, and it does excellently for cattle, &c. The best of it is appropriated to the sheep.

There are some fields adjoining the watered meadows that let only for 7s. 6d. an acre, which would be advanced to the value of 30s. if the tenants had spirit enough to bring the water over them. The soil of these tracts is clay, marle, loam, gravel, and black moory boggy land; and the last is as good as any; indeed, some of the best meadows have been peat-bogs within the memory of man. I must beg to observe on this circumstance, that the improvement of these tracts reputed so barren, by watering alone, is one of the most important points in husbandry that has been discovered. There are vast tracts of such lands, which I have viewed in many parts of the kingdom, quite flat, with rivulets running through them, which might with a little attention be improved in this manner, to the rent of from 20s. to 30s. an acre; but in countries, where the husbandry of watering is unknown,
such

286 THE FARMER'S TOUR

such facts are either treated as chimeras, or if allowed, none have spirit enough for the practice. The proper way of proceeding in such a case is, to send to some of these countries for a man used to the taking water-levels, and the distribution of it over water meadows: such an one in a single season, would teach the people of the country how to perform every operation, and the value of the lands would in this manner be advanced *cent. per cent.*

It is a maxim here, and probably a very just one, that water which comes from cultivated lands is much more enriching, than that which runs over only waste tracts, and white water from chalk the best of all. *Quere;* If this does not depend on the same principle, as the qualities of lime being communicated to so vast a quantity of water. And they reckon, that the black water from ling heaths does no good.

They never manure these meadows with any thing but water, except now and then spreading a little peat ashes on rushy spots.

Mr.

THROUGH ENGLAND. 287

Mr. *Frampton*, from this long experience of watering meadows, assured me, that *Walter Blythe*, in his *Improver Improved*, printed in the middle of the last century, has shewn himself to be perfectly well acquainted with the whole theory and practice of this part of husbandry, and recommends the perusal of his book to all persons who have an opportunity to water, but have not yet made use of it.

Respecting the improvement of the heaths or moors, of which Mr. *Frampton* has vast tracts, (some of them purchased by him at a guinea an acre fee simple) he has made no slight progress in it. He has encouraged his tenants to break up, inclose and improve, upwards of eight hundred acres, which from yielding no rent at all, now let at 10s. an acre. This shews the real fact of the improveable nature of these wastes, and the vast profit that attends the execution; for the rise from nothing to 10s. is a clear profit of some hundreds *per cent.* on the money laid out; and these lands pay this rent from being thrown into the common arable management of the country, which I need
not

288 THE FARMER'S TOUR

not tell the reader is vile enough. If these lands will pay 10s. an acre, by such a course of crops, instead of being laid down to grass, they would undoubtedly bear a much higher rent, if laid down in the manner they ought.

But this gentleman has tried the improvement of some of the worst of his wastes himself, and that he might be able to know exactly in what degree the work was profitable, he ordered various pieces of the worst he had to be inclosed for improvement. It was covered with furze and ling, which were first grubbed at *Michaelmas*; then the roots and clods were picked and thrown into rows, to make way for the plough in spring. After the ploughing, the clods, &c. were turned to dry and burn. In *March* it was dragged, and in *May* cross ploughed; after which dragged again and harrowed. The clods were then again picked and burnt, and the ashes spread; after this it was again dragged and harrowed, covering turnip seed. The crops have arisen from 5s. to 40s. in value. These are fed off before *Christmas*, and the land ploughed as fast as fed. In *May* it is again

THROUGH ENGLAND. 289

again ploughed, and then chalked; 15 waggon loads an acre; the chalk is dragged in, and turnip seed, for a crop, at the same time. This crop rises in value from 20s. to 40s. an acre. After the turnips, oats are sown; the crop 25 bushels an acre; and with the oats, clover and ray-grass, which is left 2 years; this is applied to feeding sheep, and they reckon the value of it, in rent, would be 8s. an acre: on this they fold; and sow wheat or rye; the crop 14 to 20 bushels an acre. If the clover and ray-grass is left 3 years, the furze comes again, and would cover the land if left. After this course of improvement, the tenants would give 8s. an acre for it on any lease.

The account of this improvement is to be stated as follows; the prices were given me with the preceding particulars:

Expences per acre.

Inclosing,	0	5	0
Grubbing,	0	13	0
Picking and throwing into rows,	0	0	6
Ploughing,	0	15	0

Carry over,	1	13	6
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290 THE FARMER'S TOUR

Brought over, -	£. 1	13	6
Turning clods, drying, and burn-			
ing, -	0	2	0
Dragging, -	0	3	0
Cross ploughing, -	0	6	0
Dragging and harrowing, -	0	4	0
Picking and burning, -	0	2	0
Spreading ashes, -	0	0	9
Dragging and harrowing, -	0	3	0
Turnip seed and sowing, -	0	1	3
		<u>2</u>	<u>15</u>
			6

Turnips.

Ploughing, -	0	4	0
Second ditto, -	0	4	0
Chalking, 15 loads, total expence, 2	5	0	
Spreading, -	0	1	0
Dragging, -	0	3	0
Seed and sowing, -	0	1	3
		<u>2</u>	<u>18</u>
			3

Oats.

Ploughing, -	0	4	0
Harrowing, -	0	1	0
Seed and sowing, -	0	10	3
Mowing and harvesting, -	0	5	0
Thraffing, -	0	3	2
		<u>1</u>	<u>3</u>
			5

THROUGH ENGLAND. 291

Clover, &c.

Seed and sowing,	-	0	7	0
------------------	---	---	---	---

Wheat.

Ploughing,	-	0	6	0
Harrowing,	-	0	2	0
Seed and sowing,	-	0	12	0
Reaping and harvesting,	-	0	9	0
Thrashing,	-	0	4	3
		<u>1</u>	<u>13</u>	<u>3</u>

Recapitulation.

1st Year, turnips,	-	2	15	6
2d Ditto, ditto,	-	2	18	3
3d Ditto, oats,	-	1	3	5
4th, 5th, Grass,	-	0	7	0
6th, Wheat,	-	1	13	3
Total expence,	-	<u>8</u>	<u>17</u>	<u>5</u>

Product.

1st, Turnips, from 5s. to 40s.				
average,	-	1	2	6
2d, Ditto, 20s. to 40s.; average,		1	10	0
3d, Oats, 25 bushels,	3	2	6	
Straw,	0	15	0	
		<u>3</u>	<u>17</u>	<u>6</u>
4th, and 5th, Clover 2 years;				
rent 16s.; but as it would let				
Carry over,	-	6	10	0

292 THE FARMER'S TOUR

Brought over,	-	£.6	10	0
for that, the product must				
certainly be,	-	2	0	0
6th, Wheat, 17				
bushels, at 6s.	-	5	2	0
Straw,	-	0	12	0
			5	14 0
Total product,	-	14	4	0
Ditto expences,	-	8	17	5
			5	6 7
Clear profit	-			

It then lets at 8s. an acre; this is clear profit, and must be valued at 30 years purchase, which is 12 l.: the whole profit *per* acre is, therefore,

	-	£.17	6	7
On 100 acres it is	-	1732	18	4
On 1000 ditto,	-	17,329	3	4

This is the system which has been executed over several fields: some of them as bad as any in the country; and it has answered in this manner. Now, I must beg leave to observe, that the land turning out profitable on this method of conducting the improvement, is the clearest proof in the world of its excellence. The method taken to break it up is very expensive, at the

the same time that it is ineffectually done, as appears by the furze (whins) coming again if the land is left in grass longer than two years. And the system of keeping these soils in tillage is by no means advisable; they are much more adapted to being permanent pastures; not after laying down with ray-grass; for I would not use a grain of that seed; none but white clover, trefoile and rib-grass; the field would then be for many years in a constant state of improvement.

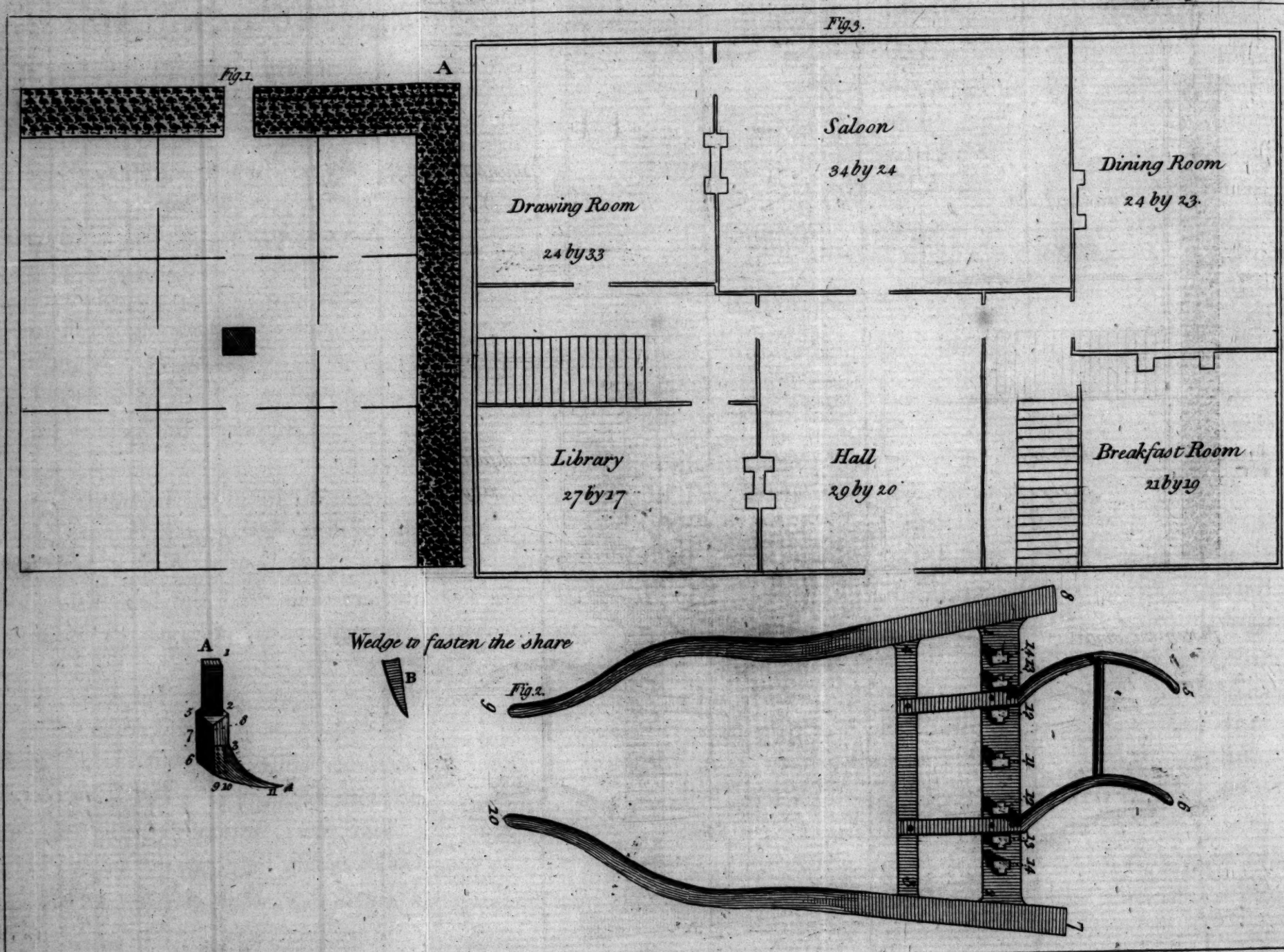
Paring and burning is undoubtedly the proper method of breaking up all waste lands that are over-run with any sort of spontaneous rubbish, for it is the only way that kills it effectually; unless lime is to be had, in great quantities, cheap, which is not the case here. That this idea is just here as well as elsewhere, Mr. *Frampton* has fully experienced; for since the above improvements he has broken up some waste in this manner, first grubbing, and then paring and burning, at 25*s.* per acre; after which, one ploughing was given for turnips; the crop, without hoeing, worth 50*s.* an acre; then the land was chalked,

294 THE FARMER'S TOUR

and a second crop taken worth 3*l.* an acre: these prices shew sufficiently that the land, with proper management, is admirably adapted to this husbandry: Thus far the course was good, but then vetches and pease were sown, which did not yield more than 40*s.* an acre; whereas oats, undoubtedly, should have been the crop, which would have been 5 or 6 quarters; and with these oats the grass seeds; instead of which wheat was sown; the crop 2 $\frac{1}{2}$ quarters. In a word, the whole course shews, evidently, that there is no fault in the soil, but that with proper management, the profit of improving it is very great; nay, it is considerable with improper management; the goodness is such, that any conduct will prove advantageous.—This despised, neglected land—the fee-simple of which is bought for a guinea an acre!

Mr. *Frampton* has improved considerable tracts by planting; and the profit of that method will certainly be very great. He has a plantation of *Scotch* firs 11 years old, against one of the above new broken up fields, which are now worth 1*s.* 3*d.* each.

I shall



I shall here beg leave to calculate the profit of improving these wastes, and include in the account both husbandry and planting, taking the above prices, &c. for the foundation of the estimates.

Plate XXVI. Fig. 1. represents a square mile, or 640 acres.

It is divided into 130 acres of plantation, and 510 of fields for cultivation. The trees I shall suppose to be spruce, *Scotch*, and silver firs, and larches, set at two years old in squares of 3 feet, after the land is pared and burnt.

Relative to the buildings I enquired particularly of Mr. *Frampton* (who has built several new farm-houses, &c.) concerning the necessary ones, and the expence; and those minuted below, are such as he pronounced necessary.

I shall not suppose any grubbing, because, in the first place, it is well known in the north to be quite unnecessary on land covered with whins 4 or 5 feet high; and in the next place, supposing it done, the value of the whin faggots, in this country, would much more than pay the expence;

296 THE FARMER'S TOUR

but I should prefer burning the whole amount of all the rubbish,

One ploughing to be given for turnips, which are undoubtedly to be well hand-hoed twice; the crop fed on the land by sheep; and in compliance with the preceding trials, I shall suppose a second crop of turnips managed totally in the same way, except the circumstance, as above, of being chalked; which most certainly is good husbandry. After the turnips I suppose oats, which should not, on any account, be deviated from; because after pared and burnt turnips, and a second crop of turnips, both fed on the land by sheep, the product will undoubtedly be immense; and at the same time will not hurt the grasses.

These I should recommend to be 15 lb. white clover, 8 lb. of rib-grass, 5 lb. of burnet, and 5 lb. of trefoile; after which the improvement is completed.

As to tilling the land, I suppose the whole laid to grass, and what arable may be wanted, should, on these soils, be gained by paring and burning one old pasture
every

THROUGH ENGLAND. 297

every year, and laying one down in the manner above-mentioned; but this should, in quantity, be no more than sufficient to yield a field of turnips every year,

Expences.

In the square there are 10 miles,
or 3200 rods of fencing.

The method proposed here,
is, to make a 6 foot bank,
and sow furze on the top;
the total expence of which
is 1 s.; but I shall suppose
double ones, and a space
between planted with quick
double rows; banks, 2 s.,
quick, 1 s. in all 3 s. £.480 0 0

Eleven gates, posts, irons, &c.
complete, at 21 s. - 11 11 0

Buildings.—The house, £.250

A barn, 100

A stable, 40

A cowshed, 50

Hogsties, &c. 20

Walling, 40

— 500 0 0

Carry over, -

991 11 0

298 THE FARMER'S TOUR.

Brought over,	-	£. 991	11	0
Planting 130 acres, the raising the trees and setting, 40s.				
an acre,	-	260	0	0
Paring and burning, at 25 s.		800	0	0
Chalking, which is entered here though not done till second crop, at 46s. 510 acres,	-	1173	0	0
Total,	-	3224	11	0

First. Turnips.

Ploughing, at 10s. This is a monstrous price, but I allow it to obviate objections,		255	0	0
Harrowing seed and sowing, 2s. 6d.	-	63	12	6
Twice hoeing, 10s.	-	255	0	0
Suppose we allow rent of land, tythe, and town charges, 2s. 6d.; plantation 1s.		70	2	6
Expence on Turnip crop,		643	15	0

Second. Turnips.

Ploughing thrice, at 5s.		382	10	0
Harrowing seed, &c.	-	63	12	6
Carry over,	-	446	2	6

THROUGH ENGLAND. 299

Brought over, -	£. 446	2	6
Twice hoeing, -	255	0	0
Rent, &c. - -	70	2	6

Second crop Turnips, 771 5 0

Oats.

Three ploughings, -	382	10	0
Harrowing and sowing,	63	12	6
Seed, at 10s. - -	255	0	0
Mowing and harvesting, at 5s.	127	10	0
Threshing, 6 quarters per acre,			
3060 quarters, at 1s.	153	0	0
Carrying to market, suppose 6d.			
a quarter, - - -	76	10	0
Rent, - - -	70	2	6
Expence on Oat crop,	1128	5	0

First year of grafs.

Seeds sown with the preceding oats.

15 lb. Clover, 6d. -	0	7	6
5 lb. Trefoile, 3d. -	0	1	3
5 lb. Burnet, 3d. -	0	1	3
8 lb. Rib-grafs, 6d. -	0	4	0
	0	14	0
Sowing, at 1s. -	25	10	0
Carry over, -	382	10	0

300 THE FARMER'S TOUR

Brought over, -	£.382	10	0
Mowing, making, carting, and stacking the hay, 10s. -	255	0	0
Rent, -	70	2	6
First year of grafs, -	707	12	6
First improvement, -	3224	11	0
First turnips, -	643	15	0
Second ditto, -	771	5	0
Oats, -	1128	5	0
First year grafs, -	707	12	6
Total expence, -	6475	8	6

Product,

First turnips, at 3 <i>l</i> . -	1530	0	0
Second ditto, -	1530	0	0
Oats, 6 quarters, at 20s. -	3060	0	0
First year's grafs, 1 ton per acre, at 30s. and after- grafs 5s. -	892	10	0
Total product, -	7012	10	0
Expences, -	6475	8	6
Profit, -	537	1	6

Here

THROUGH ENGLAND. 301

Here we find that the improver enters to possession of a new created estate, consisting of 640 acres; 130 of young plantation, and 510 of excellent grass; for such, Mr. *Frampton* and every one will allow it to be, on the preceding plan of expensive and complete management. The fences uncommonly good; the gates, &c. all new; the buildings substantially erected of brick and tile, and very complete. He enters at once on all these; not by purchase—not by any expence—but by means of acquiring a neat profit of more than 500*l*.—Suppose the farm, in this very complete order, to let for no more than 15*s*. an acre; though from various circumstances quite peculiar to it, on comparison with the general run of farms, there is the greatest reason to value it higher; at that rate the income will be 382*l*. 10*s*. exclusive of the plantation. Suppose it lets only for 10*s*. it is then 255*l*. a year; and on this I shall calculate, being the lowest rent, and one which no person even in this country objects to. I shall suppose the plantation to stand 20 years without any other cutting than thinning, so as to leave 2000 trees on each acre; and then
to

302 THE FARMER'S TOUR

to cut 6 acres, and the same quantity afterwards, annually: planting the land thus cleared again, so that for ever after, there will be an annual cutting of 6 acres. The trees I shall value only at 2*s.* 6*d.* each, which is much under most of the plantations recorded in this Tour; and less than the average of them all. The previous thin- nings I shall suppose to pay no more than for keeping the fences in repair, and new planting the annual 6 acres after 20 years are expired. The state of the farm for the first 20 years is;

Profit on the first improve-
ment, - - - £. 537 1 6

Annual rent of it for 20 years 255 0 0

Suppose the old rent 1*s.* 32 0 0

Clear profit *per ann.* 223 0 0

After the expiration of 20 years, the account will be;

Rent clear, as above, - - - £. 223 0 0

6 Acres of firs, 2000 *per acre*,
at 2*s.* 6*d.* - - - 1500 0 0

Total income, - - - 1723 0 0

Thus

Thus we find, on the whole, that by making a profit of 500 *l.* an income of 223 *l.* *per ann.* is gained for 20 years, and after that, an income of 1723 *l.* *per ann.*

But now come the wise remarks of sleepy Prudence, that sagely thinks every deviation from the old path, the mere wanderings of visionary projectors. Who, after humming and hawing over the account, will discover certain inaccuracies of pence and farthings, or bushels of corn; and thence critically assert the calculation wrong. But I beg these gentlemen will note the full amount of their objections—they cannot possibly raise them to 2 *per cent.* on the whole account; for all the principal *data* on which I have calculated, are facts, not imaginary, but actually executed by Mr. *Frampton* in various methods: I have only drawn them into one view, by giving their proportions to a square mile of improved land; so that objections must first be raised to the facts, before the calculation can be impeached.

But if any part is calculated too high—if the oats yield not 6 quarters; if the hay yields not a ton; if a fir is worth but 2*s.*

in

304 THE FARMER'S TOUR

* in 21 years, &c. &c. calculate the amount of all these objections, they will leave the profit so undoubtedly great, that the same inducement will remain for landlords to make use of such noble opportunities as the possession of these waste lands.—I address myself particularly to Mr. *Frampton*, with the more reason, as he has shewed a spirited disposition to prosecute these improvements, not only by encouraging his tenants to bring into culture, large tracts of these wastes; which they have already done to the amount of 800 acres, (*now let, by the way, at 10s. an acre*) but also has improved much himself: much remains to do, for his house is situated in the middle of more than 10,000 acres, all his own: he should by no means despair of making it as many pounds a year. Nor are these improvements the only objects

* Suppose, it is said, that 1500l's worth of firs, at 2s. 6d. could not be sold; this is no objection, for then cut but 3 acres *per ann.* at 5s.; or fewer trees at a larger value, which certainly are saleable. All the experiments inserted in the preceding articles prove, that the longer the trees are left on the ground, the greater the annual profit; so that this objection, if pursued, will only increase the profit to 4, 5, or 6l. *per acre per ann.* higher rates than I chose to suppose, though equally certain.

objects that have possessed his attention; besides new building the mansion house * in a handsome and convenient manner; he has erected four farm-houses completely; several bridges, and made 12 miles of road, equal

* It contains several very good pictures.

Dominicini. Rinaldo and Armida. The attitudes extremely natural; and the expression very pleasing.

Now bending down enraptur'd as he lies,
She kiss'd his vermil lips and swimming eyes;
Till from his inmost heart he heav'd a sigh,
As if to hers his parting soul would fly!

Geraldo dell' Notte. Jacob and Esau. A candle-light piece: very natural; the countenances truly expressive.

Gisolfi. Ruins. Good: excellent keeping.

Seb. Ricci. Two landscapes. Various expression: pleasing; particularly the more rural piece.

Baptista. Two landscapes. That with a bridge, agreeable.

Bonaria. A sea piece.

Ditto. Landscape with ruins.

Ditto. Diana and Acteon. There is a brilliancy in these pieces; but not strictly natural.

Unknown. Two pieces of architecture.

Ditto. Portrait of Mr. Frampton's grand-father. Fine.

The environs of the house are laid out in an agreeable manner, in lawns ornamented with plantations, from one of which, on a hill, are many extensive views.

306 THE FARMER'S TOUR

equal to many turnpikes : all works that shew a spirit superior to trifling obstacles, nobly exerted in enriching and ornamenting the country.

One of this gentleman's inferior tenants, by name *William White*, has, from a long series of attentive industry in his agriculture, particularly in watering meadows, acquired more knowledge than most of his neighbours ; and his rise from being a day labourer to a little farmer, chiefly owing to himself, shew a merit not common, but whenever met with, highly deserving commendation. For several years, while he had nothing but his own labour, he saved regularly 10*l.* a year ; an instance of frugality and sobriety which is much to his honour among so many poor neighbours, whose conduct is the very reverse. These savings he continued for 20 years ; amassing, in this manner, the sum of 200*l.*

He began his husbandry with a lease on lives, of a meadow and an orchard ; together 2 acres ; and soon after 2 acres more of bog land, at 1*s.* 6*d.* an acre. He confined himself to this small space of land, that he might have the satisfaction of cultivating

tivating it with his own hands; and this he did with great industry.

He applied himself with particular attention to the improvement of the bog, by watering; and soon succeeded so far as to make it yield a load of hay an acre; coarse, but better than straw; and this it did besides yielding 2 months feed in *April* and *May*, worth 10s. an acre; and an after-grass worth 2s. 6d.; which improvement, upon the whole, is very great, and proves, if proof was wanting, the great importance of watering these boggy soils.

For his other 2 acres he gave 15s. an acre; $1\frac{1}{4}$ of it he made worth 30s. an acre, also, by watering; and the other $\frac{1}{4}$ he planted with apples for an orchard. It is surprizing to think what success his industry, from the beginning, has met with; this orchard has turned out so well as to produce from 7 to 10 hogsheds a year, of cyder; and he could let it at 3 l. a year. These improvements were soon after followed by a legacy of 20 l. and he got 60 l. more at his mother's death. These very great advantages he applied immediately to extending

308 THE FARMER'S TOUR

his business; he bought lease-holds on lives of 87 acres.

Bringing water over all the land that he possibly could, has been the principal means of his general success with grass land; and this work, as he had much experience, and gave great attention to it, he has carried to no slight degree of perfection. I enquired of him particularly into his practice in this particular, and the account he gave me was as follows.

He finds that a black peat bog, however low the value, wants nothing but to be laid properly under water, to be converted very soon into good meadow land: the water not only brings a fine growth of grass which never appeared before, but the weight of it consolidates the porous quality of the bog, and renders it really sound land; so that the largest cattle may feed with safety, where the smallest could not venture before.

In disposing the trenches and drains for watering land, the drains for carrying the water off, must be 2 feet deep—open ones; and have such a descent, that the water may not remain in them. The trenches to bring the water on, should be above the
I drains

drains to carry it off, which ought to be in every 20 feet of land. At the spots left for teams to go in and out, through which the drains are not cut, he lays stones to make firm cart-ways; and he observes that, at these places, is much the best grass; this he attributes to the stones heating the water in summer; but that idea is certainly false; the effect arises from the weight laid on this porous earth, which is here sufficient more than to compensate the advantage of greater draining, and is the strongest proof in the world, that heavy rolling would do wonders on these soils. The advantage of these stones was so great, that he regretted not being able to cover all his bog with them, being certain that they would work an uncommon improvement. By these means he has advanced his bog to yield the above products; though it was not, before, worth a groat an acre.

Gravelly and sandy soils, worth from 2 s. 6 d. to 5 s. an acre, he has advanced to be well worth 30 s.

He begins to water at *Allbollontide* for a month, but is always careful not to float it quite; the meadow retains its usual appear-

310 THE FARMER'S TOUR

ance while the water is on it: It runs off as fast as on, and the quicker the better. He then keeps them dry for about three weeks; then he lets in the water for a fortnight; continuing this alternate management till *Candlemas*, when he feeds it for a week with sheep; after which he waters it again for another fortnight. From *Lady-day* he lets in the water for three days only, and then keeps it dry a week; that week he succeeds by 24 hours water; and after *May-day* he lets in no water, unless it be a dry time, in which case he throws some over it, through the month of *May*, at times.

He then leaves it for hay, of which the crops vary, but generally rise from 2 to 3 tons an acre. After the hay is off, he lets in the water for 2 days, and then feeds the land with his dairy of cows.

He remarked, and it is the general observation of the country, that these watered lands never rot sheep in the spring, though they immediately follow the water, or are turned in at any time, or in any manner; but if they are turned into the after-grass, it surely rots till the autumnal watering, after

THROUGH ENGLAND. 311

after which they are safe. They keep their sheep in till *May-day*, which, they assert, would be sure to rot them was not the land watered: and also that the very worst land in the country, for rotting, is perfectly cured by watering.

His farm consists of,

44 Arable	7½ Wheat
18 Watered mea-	14 Barley
dow	7½ Clover.

28 Cow pasture

Sixteen of these arable acres he inclosed from the heath: and has found the improvement to answer extremely well. His course on them is;

1. Oats

2. Oats

3. Clover and ray-grass 2 years.

Since the taking this lease, he has hired another farm of

£. 50 A year rent	44 Watered mea-
266 Acres	dow

63 Wheat

4 Upland pasture

16 Oats

6 Horses

24 Clover, &c.

40 Cows

3 Black heath

44 Young cattle

3 Wood

3 Sows.

109 Cow pasture

X 4

Twenty

312 THE FARMER'S TOUR

Twenty two acres of heath, in this farm, he has improved by grubbing, which cost him 15*s.* an acre; then it was ploughed, cross ploughed, and dragged; the expence 20*s.* an acre, and sown with wheat; the crop 15 bushels. On one ploughing he then sowed oats; the crop 25 bushels *per* acre. Then another crop of oats; 25 bushels more; with these, clover and ray-grass were sown. On the grass he chalked, 14 two horse loads an acre; the expence 28*s.* The grass continued very good for 3 years. He mowed it twice the first year; the crop 2 tons of hay. He ploughed it up for wheat; the produce 12 bushels: then oats 20 bushels—then another crop of oats as much more. With these laid again to grasses to remain: it has now been laid 8 years, and would let for 20*s.* an acre, he informed me. The soil is a reddish black moor; was quite over-run with ling, furze, fern, &c. Let me calculate his expences and profit, *per* acre, on this improvement, which was certainly conducted on as bad principles as it well could be;—though according to the ideas of the *Dorsetshire* farmers.

THROUGH ENGLAND. 313

I. WHEAT.

Grubbing, - -	£. 0 15 0
Ploughing and dragging, -	1 0 0
Seed and sowing, -	0 12 0
Reaping and harvesting, -	0 9 0
Threshing 15 bushels, -	0 3 9
Carrying, 6d. a quarter, -	0 1 0
Rent, &c. - -	0 2 0
	3 2 9

II. OATS.

Ploughing, - -	0 5 0
Harrowing, seed and sowing, -	0 11 3
Mowing and harvesting, -	0 5 0
Threshing, - -	0 3 2
Carrying, - -	0 1 6
Rent, - - -	0 2 0
	1 7 11

III. OATS.

As before, - -	1 7 11

IV. CLOVER.

Seed and sowing, -	0 7 0
Mowing, making, &c. &c. -	1 0 0
Chalking, - -	1 8 0
Rent 3 years, - -	0 6 0
	3 1 0

314 THE FARMER'S TOUR

V. WHEAT.

Ploughing,	-	£. 0	5	0
Seed, sowing, reaping, &c. &c.				
as before,	-	1	1	0
Thrashing 12 bushels,	-	0	3	0
Carrying out,	-	0	0	9
Rent,	-	0	2	0
			1	11 9

VI. OATS.

As before,	-	1	7	11
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VII. OATS.

Ditto,	-	1	7	11
Grass feeds,	-	0	7	0
			1	14 11

I. Wheat,	-	3	2	9
II. Oats,	-	1	7	11
III. Oats,	-	1	7	11
IV. Clover,	-	3	1	0
V. Wheat,	-	1	11	9
VI. Oats,	-	1	7	11
VII. Oats,	-	1	14	11
Total expences,	-	13	14	2

THROUGH ENGLAND. 315

Product.

I. Wheat, 15 bushels, £.4	10	0	
Straw, -	0	12	0
			5 2 0
II. Oats, 25 bushels, 3	2	6	
Straw, -	0	15	0
			3 17 6
III. Oats, as before, -			3 17 6
IV. Clover, 1st year			
2 tons, -	3	0	0
2d, and 3d, -	3	0	0
			6 0 0
V. Wheat, 12 bushels, 3	12	0	
Straw, -	0	12	0
			4 4 0
VI. Oats, 20 bushels, 2	10	0	
Straw, -	0	15	0
			3 5 0
VII. Oats, as before, -			3 5 0
			29 11 0
Expences, -	-		13 14 2
Profit in 9 years, -			15 16 10
Which is <i>per acre per ann.</i>			1 15 2

Let the reader here remember that I am not forming a calculation, but merely

316 THE FARMER'S TOUR

stating the account of an actual improvement of 22 acres, undertaken, and executed, by this very industrious farmer. In order to raise the value of the land to 20*s.* an acre; he gains 35*s.* *per acre per ann.* during 9 years! Now if this does not confirm the extreme moderation of my calculation of the improvement of a square mile—there is not a fact in husbandry. This country, it is sufficiently evident, possesses the facts that prove the expediency of these improvements, but unfortunately they never combined those facts. With these very strong ones, constantly before their eyes, they scarcely knew whether breaking up the wastes was profitable or not; as we may easily judge by such vast tracts remaining open: but surely all these scattered circumstances united into such evident proofs, will be sufficient to open the way to extensive undertakings, and to rouse landlords from the amazing lethargy in which they have so long been dreaming of difficulties that never had an existence.—But to return to the honest farmer who has set so good an example.

Although

Although he has been fortunate in making some considerable acquisitions, those of 60*l.* and 20*l.* yet he has been a great sufferer by fire: He has been twice burnt out, by which accident he lost an hundred pounds, notwithstanding the uncommon industry of repairing his buildings with his own hands; he was his own carpenter, mason and thatcher.

He was very explicit in assuring me, that his success in husbandry has been chiefly owing to keeping very great stocks of cattle, watering his meadows, and other exertions; but had been attended with no great consequences, had it not been for the number of his cattle so much exceeding that of his neighbours. When he had but 18 acres of grass, he kept 20 beasts and three horses, but always tied them up in stalls; by which means the straw and hay go much further than when given in any other method. He now regularly ties up 40 cows, and 44 young cattle: he even keeps calves confined in the same manner, and all are littered, and cleaned out regularly: by this means he has such large quantities of dung, that his farm is necessarily kept in good heart.

He

318 THE FARMER'S TOUR

He has 36 cows and four horses tied under one roof; they eat every winter 50 ton of hay, and 20 acres of straw for litter; but some of it is eaten: and he assured me, that this quantity of hay would not more than half do, if it was given in a yard or the field.

These forty head make 200 loads of dung quite rotten, and in order for the land, or five *per* head. However, his winter system respecting dung is not perfect; for they are all let out of days to run over the pastures; whereas they ought to be constantly confined.

His general system of keeping as large stocks of cattle as possible, and tying them up, that their hay may go the further, and for the better collecting the dung, is undoubtedly excellent, and much deserves imitation. It is upon cattle that the whole farm depends, unless the situation is such as to command any quantity of town manures; but the cheapest manuring, by many *per cent.* is that raised at home by keeping great stocks of cattle; and if there is plenty of fern, straw, stubble, &c. to be purchased, nothing in husbandry answers better than such a conduct: for this system
may

THROUGH ENGLAND. 319

may then be carried to such an extent, as to improve very speedily all the lands of a farm.

Upon the whole, the industry and attention of this farmer are highly commendable, and his exertion of both very uncommon. He gained 80*l.* by legacies; but he lost 100*l.* by fires: so these may be supposed to balance. He began with nothing but the savings of his daily labour; and has now,

A leasehold of 87 acres, for which he gave 15 years purchase, at 45 <i>l.</i> a year,	- - - <i>£</i> . 675
---	----------------------

The stock of a farm of 95 <i>l.</i> a year, which, as he keeps so much more cattle than common, may be estimated at five rents, or	- - - 475
--	-----------

His horses, cows, and young cattle alone, come to 352 <i>l.</i> or more than three rents and an half.	- - - —
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Total,	- - - 1150
--------	------------

Now it is certainly a very extraordinary instance of frugality, diligence, and good sense, for a day labourer to raise himself so much as this; and I think his saving 10*l.* a year out of his earnings, and making
so

320 THE FARMER'S TOUR

so great use of it, is a striking lesson to many of his brethren all over the kingdom. There are numbers that might act thus, if they had but the resolution. The singularity of the case reflects the more lustre on the worthy man, whose honest industry and ingenuity has performed such wonders for himself, and I may certainly add, so much advanced the interest of his country. Such an example can never fail of being beneficial.

From *Moreton* to *Dorchester*, the country is inclosed, and the husbandry much the same as that I have passed, except near *Dorchester*, where the famous sheep farms are, which form some variations. *Cornwallis Maude*, Esq. at *Clift*, has made some trials, which will be of great use.

Experiment, No. 1.

In *March*, 1770, planted an acre of potatoes on a rich sandy loam, worth 20s. an acre: 20 bushels of sets were used, and all expences amounted to 3*l.* 10s. They are in squares of three feet. The produce from some taken up is found to be 21*l.*

Experiment, No. 2.

In *June*, 1770, planted two acres of the great *Scotch* cabbage, in squares of three feet,

feet, in the same field as the potatoes: the seed sown in *March*. They have been kept perfectly clean from weeds, and are arrived at a good size. I reckon they will on an average come to about 12 *lb*. Mr. *Mawde* designs them for the winter food of his dairy of milch cows, and extremely profitable they will certainly prove.

Experiment, No. 3.

In *March*, 1770, drilled half an acre with parsnips, the rows equally distant, two feet, in the same experiment field as the preceding crops; they were kept quite clean by hand and horse-hoeing.

Experiment, No. 4.

Drilled in the same field in *April* two acres of pease, in rows equally distant, three feet asunder; kept perfectly clean by hand-weeding and horse-hoeing; the crop a very fine one; the straw was 11 feet long.

Experiment, No. 5.

Mr. *Mawde* has this year 17 acres of turnips, well hoed. He formed this trial in the midst of a country, where so few farmers hoe, that he might be able to decide particularly the superiority of the practice: they are a fine regular crop; I

322 THE FARMER'S TOUR

have seen very few that exceed them. On weighing many, he determines them to be 7 *lb.* on an average, which is a vast crop.

This gentleman uses oxen for his tillage, four in a plough, and they do an acre a day; whereas there are many horse-ploughs of four, and they do no more; and if they work in the best manner of any in the country, it takes three to equal his four oxen, though the expences of the three horses are more than of six oxen. This is a very decisive comparison.

Plate XXVI. Fig. 2. represents a machine of this gentleman's invention for striking furrows for drilling: it is a very useful implement.

				<i>Feet.</i>	<i>Inches.</i>
From	1	to	2	— 5	7 $\frac{1}{2}$
	2	to	3	— 1	11
	3	to	4	— 5	4
	5	to	6	— 2	3
	6	to	7	— 3	0
	8	to	9	— 10	10
	9	to	10	— 1	11
	11	to	12	— 1	0
	12	to	13	— 0	6
	13	to	14	— 0	6

THROUGH ENGLAND. 323

A is one of the teeth.

			Feet.	Inches.
From	1	to	2	— 1 0
	3	to	4	— 0 11 $\frac{1}{2}$
	5	to	6	— 0 9 $\frac{1}{2}$
	7	to	8	— 0 3
	9	to	10	— 0 3
	10	to	11	— 0 3

B, a key to fasten the teeth of the drill in the frame.

Mr. *Maude* is at present engaged in bringing a farm of 300 acres into excellent order; and these few particulars shew, that he bids fair for doing it in an effectual manner.

The Rev. Dr. *Lloyd* * has, at *Puddletown*, a small close of three roods, drilled with lucerne, in equally-distant rows, 18 inches asunder. The soil a good turnip loam, worth 10s. 6d. an acre. It is five years old, and was thinned in the rows to the distance of one foot from plant to plant. He has always kept it clean by horse and hand-hoeing: the first is executed with a small shim of his own invention, which has saved greatly in hoeing the intervals.

Y 2

tervals.

* Dean of *Norwich*.

324 THE FARMER'S TOUR

tervals. The whole expence of cleaning has been 22*s.* 6*d.* *per ann.* It has regularly every year kept three horses, during 18 weeks in summer, which the Doctor values at 2*s.* 6*d.* *per horse per week*; but it would have yielded a greater produce, if several patches had not totally failed. The annual account of an acre may be stated as under.

Expences.

Rent,	-	£.0	10	6
Tythe, 3 <i>s.</i> 6 <i>d.</i> in the				
pound,	-	0	1	9
Rates, 2 <i>s.</i> 6 <i>d.</i>	-	0	1	3
				0 13 6
Cleaning,	-	-		1 10 0
Reaping, suppose four times, at				
3 <i>s.</i> 6 <i>d.</i>	-	-		0 14 0
Loading and carting home, sup-				
pose 1 <i>s.</i> 6 <i>d.</i>	-	-		0 6 0
Total,	-	-		3 3 6

Produce.

Keeping four horses 18 weeks,				
at 2 <i>s.</i> 6 <i>d.</i>	-	£.9	0	0
Expences,	-		3	3 6
Clear profit,	-		5	16 6

THROUGH ENGLAND. 325

Which is another proof of the real importance of lucerne, and shews, that every man, who thinks of keeping horses, should appropriate land enough to lucerne for their summer maintenance: a conduct that could not fail of being highly advantageous.

As I shall come next to the sheep part of this county, I here conclude this letter.

Your's, &c.

LETTER XXVIII.

FROM *Dorchester* I went to *Came*, the seat of *John Damer*, Esq.* from whose attention to agriculture, particularly sheep husbandry, I am enabled to give the following account.

Farms in this neighbourhood rise from 300*l.* to 700*l.* a year. The soil is in general a light loam on chalk; but there are some gravels. The general rent is about 5*s.* an acre, except the sheep pasture, called here the ewe lease: these are 15*s.* and, being pretty extensive, they raise the average rent to 11*s.*

From *Dorchester* to *Ridgway-hill*, in the way to *Weymouth*, 7*s.*; from thence to *Weymouth*, heavier soils and small farms; rent 15*s.*

The general course of crops is,

- | | |
|-----------|------------------|
| 1. Wheat | 4. Ray-grass and |
| 2. Barley | hop clover, from |
| 3. Oats | 3 to 5 years. |

They

* Member for *Dorchester*.

THROUGH ENGLAND. 327

They plough but once for wheat, sow 3 bushels an acre, and reap on an average 17 bushels. For barley they give three ploughings, sow 4 or 5 bushels, and reckon the average produce at 20 bushels. They stir but once for oats, sow 5 bushels an acre; the crop 24 or 25. They sow very few pease, and no beans. In respect to turnips, it is not yet a general culture, extending no further, than many farmers having one small field of them every year; but all have, by no means, advanced thus far. They plough thrice for them, but do not hoe; feed the crop on the land with sheep; the value *per* acre 30s. Their grasses, viz. ray and hop, are in general fed wholly with sheep.

The very best farmers sow few winter vetches, for feeding sheep: they begin them about the middle of *June*.

Most of the land in this country is excellently adapted to the culture of sainfoine; but there is none sown, except by Mr. *Damer*.

In their system of manuring, the sheepfold is what they most depend on: they fold their ewes from *Lady-day* to *Michaelmas*; but the wethers all the year. They

328 THE FARMER'S TOUR

reckon 1000 sheep will fold an acre in a night once, and that the value is 15s. on an average; but much the best at *Michaelmas*. They prefer an ewe fold to a weather one, on account of their making more water; but this does not take in the difference of one being only for half, but the other the whole year. They reckon the best application of the fold to be on wheat land, after it is sown.

Their farm-yard management is as execrable as it well can be: nothing is eaten there but straw; the hay is all stacked about the fields, not for the sheep alone, but also the cows, and they know nothing of chopping stubbles. Chalk they spread on all waste furze land, on the breaking it up, 60 cart loads *per* acre. The expence, Digging, filling, and spreading,

2 men, 30 loads a day,	£. 0	2	0
Five horses, 2 carts and a driver,	0	7	0
Total,	-	-	0 9 0

Which is 18s. an acre; but this supposes that the chalk is in the field. It lasts good 15 years.

Their

THROUGH ENGLAND. 329

Their hedges are all plashed, but they have no ditches.

The best grass in the country is the watered meadows, which let for 40s. an acre; and others, where the water is not regularly had, at 30s. They are all mown for hay. Mr. Damer's best meadows yield an *G. wt.* of hay *per* acre for every day it is hained; if it is snut up 40 days, they yield two tons an acre. This is certainly an astonishing degree of fertility; land in 20 days yielding a ton an acre is a most uncommon growth. The general produce is about 2 ton an acre dry in the winter. The spring feed and the after-grass they value at 15s. an acre.

Their breed of cattle is the long-horned western: a good cow gives 6 *lb.* of butter a week, from four gallons of milk a day. They are let at 4*l.* to 5*l.* 5*s.* a cow, and they reckon the dairy-man's profit at 10*s.* which seems strangely low, especially as they have all the farm yard for swine into the bargain, and the keeping a mare and colt.

A dairy-maid they reckon can take care of ten cows; the winter food is straw, till they calve, and then hay. They calculate,

330 THE FARMER'S TOUR

that one ton of hay will winter a cow; if they have straw besides, half a ton will do; but they are kept on grass alone till *Christmas*. Their swine fatten to seventeen score.

In their tillage they reckon 16 horses necessary for 400 acres arable; they use four in a plough, and do an acre a day, four inches deep; the price 5*s.* an acre. They do not practise the cutting straw into chaff. Wheel ploughs only used.

In the hiring and stocking farms, they reckon 3000*l.* necessary for one of 500*l.* a year.

Land sells at 30 years purchase; land-tax 1*s.* at a 4*s.* cels; tythes in general compounded 2*s.* 6*d.* in the pound; poor rates 1*s.*; their employment spinning: all drink tea twice a day.

The farmers all have leases; they carry their corn two miles.

LABOUR.

One shilling a day the year round, except at reaping.

I have omitted speaking of sheep, that I might unite in one view the intelligence I received concerning them.

Flocks rise from 500 to 13000, which

vast number one man keeps. The breed is all the well-known *Dorsetshire*, of which such great numbers are annually sold at *Whey-hill* fair in *Hampshire*. Here they reckon them much better sheep than those of *Wiltshire*, though smaller; but I remarked in all the flocks I saw, that there were vast numbers with legs long enough to disgrace any breed.

The progress of sheep is here reckoned as follows. They are lambed in *November*, and the females are called *chilver lambs*, and the males *pur-lambs*: and thus they are termed till shearing: then the *chilver* ones become *thraves*, and the *purs* *gridlings*, or two-tooth'd. These nominations continue till the next shearing, when they become *four tooth'd*, that is two years and a half old.

The shearing after that they commence *six tooth'd*; and after the next they go off at four years and a half old to *Weyhill* fair, where the ewes are sold big with lamb, and are reckoned the better in proportion to their early lambing. All ought to be warranted to lamb five weeks before *Christmas*.

I before

332 THE FARMER'S TOUR

I before observed, that they did not fold their ewes in winter: I enquired their reasons for this omission, and they all treated the idea with much contempt, though I mentioned many counties where it was commonly practised. Among other things, they said, that the flock, in rushing out of the fold, would run over and tread on the lambs; but nothing of this sort is found to be the case, where the practice is common: they also said, that the lambs would not be able to find their dams in a large fold; but certainly a lamb in *Dorsetshire* has as much sense as a lamb elsewhere, where no such evil is felt. It is this practice of not folding the ewes in winter, which gives, and with some reason, the character of *tender* to their sheep, which is common in many countries, in which the *Dorsetshire* sheep are well known.

Every farm in this country has what they call a *ewe lease*, which is a very extensive sheep pasture, consisting of the very best grass on the farm, next to the watered meadows; but high and dry land. This ewe lease is appropriated for their food the principal part of the year, being hained
up

up through the autumn to be ready with a good bite of grafs for the ewes and lambs very early in the fpring; and fome of the ewe leaſes are ſuch rich land, and ſo well turfed, that they vegetate conſiderably all winter through, except in froſts. It is by this conduct, with in general a vaſt range of land, that enables them, moſt unprofitably, to do without turnips; depending on hay and grafs, alone, for all their flocks.

Mr. *Damer's* ſheep land is exceeding fine, and his flock remarkable for ſelling at high prices. The ſtate of it is as follows.

800 Ewes,
300 Wethers,
300 Chilver hogs,
160 Wether hogs,
30 Rams.

1590

His annual ſale, of late years, has been,

280 Old ewes, at 22s.	£.308	0	0
100 Wethers, at 17s. 6d.	87	10	0
24 Ditto, at 16s. 6d.	-	19	16
100 Lambs, at 13s.	-	65	10
Wool, - - -	152	1	0
Lambs ditto, - - -	39	0	0
Total, - - -	<u>671</u>	<u>17</u>	<u>0</u>

334 THE FARMER'S TOUR

This profit is therefore about 8*s.* 6*d.* a head on the whole flock. This appears rather low, particularly in the number of lambs fold. Without dividing the particulars, their idea was, that they paid on the whole flock 10*s.* a head.

I was particular in my enquiries upon this, as I had, from riding over some farms, conceived the idea of their sheep husbandry not being profitable, from the quantity of land applied to their use: but this notion may be fully explained by an examination of Mr. *Damer's* farm; which I the rather fix upon, as it is evidently managed, in a manner, superior to most of the farmers—the sheep are excellent stock—the ewe lease superior to any I had seen; for if mown, it would yield 2 or 3 ton of hay an acre—and the price at which he sells, confirming me in the idea his sheep husbandry would be a very advantageous representative of that of his neighbours.

The particulars of his farm are as follow.

1255 Acres	526 Arable
450 Waste furze	35 Wheat
land	40 Barley
424 Grass	40 Oats

THROUGH ENGLAND. 335

30 Clover	dow
18 Sainfoine	45 Dry meadow
40 Turnips	20 Cow lease
34 Vetches	303 Ewe lease
144 Ray-grafs	500/. Rent.
56 Watered mea-	

Of this farm, the flock of 1590 sheep have;

The ewe lease,	-	-	303
Clover,	-	-	30
Ray-grafs,	-	-	144
Vetches,	-	-	34
Turnips,	-	-	40
Dry meadow,	-	-	45
Cow lease,	-	-	20
Sainfoine,	-	-	18
Part of the watered meadow,			26

Total,	-	-	<u>660</u>
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But out of these lands a deduction, but not a great one, is to be made, on account of part of the food of some horses and cows. It is difficult, exactly, to calculate this; but I was informed that it was not near equal, in this valuation, to what the sheep received from the 450 acres of waste, which they

336 THE FARMER'S TOUR

they have totally, and much of it very good land, though none of it is included in the above list.—It therefore appears that the 1590 sheep have 660 acres for their total maintenance; this is near $2\frac{1}{2}$ sheep per acre. The product of the flock is, £.671 17 0
From which is to be

deducted the expence of mowing, making, carting, and stacking 80 tons of hay, which is the quantity they eat; suppose the 26 meadow and 18 sainfoine at 12s. as the crop is great, - £.26 8 0

A shepherd, at 6s.

a week. - 15 12 0

The rent of 500l.

must be divided

among the 1255

acres, which I

think may be

done thus, not

Carry over, 42 0 0

THROUGH ENGLAND. 337

Brought over, £.42 0 0 | 671 17 0
unfairly propor-
tioned.

56 acres at 40s.

303 at 12s.

65 at 9s.

526 at 6s.

Which sums a-
mount to 500*l*.

The rent to be
charged to sheep
is therefore,

303 at 12s. £.181 16

65 at 9s. 29 5

26 at 40s. 52 0

266 at 6s. 79 16

660 342 17 0

Tythe 2s. 6*d*. in the
pound, - 42 17 1

Rates, at 1s. - 17 3 0

Once harrowing, feed
and sowing 144
acres of ray-grass,
&c. and 30 clover,

Carry over, 444 17 1

VOL. III.

Z

338 THE FARMER'S TOUR

Brought over,	£.444	17	1	671	17	0
at 7s. 6d.; sup-						
pose 60 per ann.	22	10	0			
40 Acres turnips,						
worth 30s. an acre,						
but as rent 6s.						
tythe 9d. rates 3d.						
are charged before,						
we must say at 23s.	46	0	0			
34 Acres vetches; 1						
ploughing, at 5s.	8	10	0			
Seed and sowing,						
and harrowing, at						
12s.	-	20	8	0		
				542	5	1
Remains profit by sheep,				128	11	11

There should be further deducted the reparation of fences—the winter food hired—and other articles which must strike every one; however, I let those pass without minuting; but I cannot omit remarking that this rental of 500 l. a year, from the view I took of the farm, must be an old rent, and not the real value. Much of the ewe lease, instead of 12s. is worth 30s. some 20s. and the worst 15s. The arable land, at

at 6s. is preposterously low; and as to the waste, at 1s. which I have not charged to the sheep account though they have it; I can fairly assert that much of it is exceeding good land, and well worth 10s.; not a perch but what is worth 5s. Thus if Mr. *Damer* was to let his farm at the value, this profit by sheep, of 128*l.* 11*s.* 11*d.* would vanish; but whether it did, or not, is no ways material, because there cannot be a doubt that the 660 acres might be applied to a much more profitable use in tillage.

The value of the fold is to be added, but not all, as so considerable a part of the sheep land is arable, and consequently the proportion of the fold to be deducted. They calculate a 1000 sheep to be worth 15*s.* a night from *Lady-day* to *Michaelmas*: during that time the wethers are all folded. From *Lady-day* to *Midsummer*, the whole flock; and from *Midsummer* to *Michaelmas*, about a third of the whole: thus calculated, the value of the fold, of 1600, amounts to 143*l.* 2*s.* 6*d.*; from which we may, at least, deduct the 43*l.* 2*s.* 6*d.* on account of the arable, and carry the 100*l.* to the account of sheep. The turnips, alone, will

340 THE FARMER'S TOUR

take near this amount; and the artificial
grasses, certainly, much more than the rest.

Profit by sheep, - £. 128 11 11

Suppose the fold, - 100 0 0

Total, - - 228 11 11

Which is *per* acre, - 0 6 11

That this profit exceeds the fact, I am
very clear, not only from the general state
of the case, but from the ideas of these
farmers themselves.—I shall in the next
place suppose the 660 acres in the hands of
a stranger, who had not so total a prejudice
in favour of sheep alone. The land con-
sists of,

303 Acres of ewe lease.

65 Dry meadow and cow lease.

18 Sainfoine.

26 Watered meadow.

248 Arable.

As I rode over these fields, I am the better
able, fairly, to calculate their produce under
a good course of husbandry.

One part of the ewe lease, consisting of,
I think, 80 acres, is such an extraordinary
pasture, that it certainly ought to be left as

it

THROUGH ENGLAND. 341

it is: I shall suppose the 65 acres of dry meadow and cow lease, also, to remain, and likewise the 26 of watered mead, and the 18 of sainfoine. This last is not so well laid down as it ought to be; for although the land of all these hills are excellently adapted to that grass, yet as it yields a pretty good burthen of hay, and will for some years, it ought not yet to be broken up, but a considerable part of the other arable should be laid to this grass. I am very confident that with tolerable management, particularly in laying it with the first crop of corn, after turnips *well hoed*, that it would yield 2 tons of hay an acre, besides a very good after-grass. I shall suppose the farm thus arranged.

26 Acres watered meadow,

80 Upland meadow,

65 Ditto,

171

129 Sainfoine,

60 Wheat,

100 Barley,

100 Clover, *no ray*,

360—100 Turnips, *twice hoed*.

660

Z 3

Having

342 THE FARMER'S TOUR

Having thus proportioned the farm, let me beg your patience, for a while, to calculate two ways of conducting it, and I shall do it the readier because this is not the consideration, merely, of a single farm, but of a vast tract of country, which seems, almost, to be sheep mad.—I shall first calculate it, managed, as it would be in those parts of *England* where husbandry is much the best; and then give another, supposing as many sheep kept as possible.

26 Acres watered mead,

80 Upland ditto,

106 Acres mown, produce	200 tons.
-------------------------	-----------

129 Sainfoine ditto,	200
----------------------	-----

Total of hay,	400 tons.
---------------	-----------

100 Acres of clover,

65 Upland meadow,

165

5 Deduct for foiling horses.

160 Fed by sheep, 5 to an acre.

5

800 Sheep kept.

The

The products of hay, here charged, are by no means exaggerated: as to the 5 sheep *per acre*, the *Dorsetshire* farmers may think it a short allowance, but I am confident would be nearer the truth; there are several circumstances to be considered: *First*, This clover is sown with the corn which immediately succeeds turnips, amply manured and twice hand-hoed; it is not ray-grass, which, after *June*, yields not comparable to clover—nor is it sown with the *third* crop of corn following a ray-grass lay: these are the methods in *Dorsetshire*; and so truly vile are they, that it is impossible a farmer, wholly accustomed to them, can conceive what is every day executed in other countries by a different conduct: hence I reject any attention to their ideas of one or two sheep *per acre*, because they calculate on maxims diametrically opposite to mine—that is, *Dorsetshire* is peculiarly contrary to *Norfolk*, *Suffolk*, *Essex*, and *Kent*, &c. counties much better cultivated than any other in *England*.

Secondly. I shall allow the sheep a share of the after-grass of 235 acres of mowing
 Z 4 ground,

344 THE FARMER'S TOUR

ground, and all the spring feed of 26 acres of watered meadow, but none of any other.

Thirdly. I provide turnips amply, for I mean to put the flock to them as soon as the grass is done, and give them in racks, at the same time, as much hay as they will eat; not because hay is necessary, as many counties well know, but to make the turnips go the further, and to consume the hay at home, which, I think, is every where, except in the near neighbourhood of a great city, indispensable to good husbandry: I never yet heard of a man growing rich by selling hay; it is much too bulky in carriage,—By thus providing plenty of turnips, the sheep will not be starved in the spring, and require a range over vast tracts of grass, eating down the spring shoot, to the infallible destruction of the crop, whether mown or fed; nothing will bear this spring feeding but watered meadows. It is this which destroys their grasses so much, that they afterwards say they will not carry above one or two sheep *per* acre. Indeed, from my first hearing how much the farmers in *Dorsetshire* addicted themselves to sheep, I was amazed to find that they gave so little
attention

attention to turnips: that root is so absolutely necessary for the profitable management of a flock, that a good farmer, from an improved country, would think that *turnip* and *sheep*, in respect to husbandry, were synonymous terms; but the ideas here general, are quite contrary. I should however observe that better notions are creeping in by slow degrees; the best farmers begin to feel the importance of turnips; they sow one field; and a few of them begin to hoe; this is a strong proof of the justness of my observations.

Under a conduct so different from that which is common, my allowance of 5 sheep *per* acre, to the grass in summer, is undoubtedly very low; the after-grass, with it, will carry them into *January* without turnips. We must, in the next place, arrange the other. For wintering 800 sheep under the preceding circumstances, with the spring feed of 26 acres, watered meadows, I shall allow 40 tons of hay, which is more than the allowance common, at present, both here and at *Moreton*, where 500 eat 20 tons: Thus I suppose as large a quantity as if there were no turnips. Besides this
ample

346 THE FARMER'S TOUR

ample allowance, and much grass in winter, with the spring feed of 26 acres meadow, I shall further allow them 50 acres of turnips. There then remains to be otherwise disposed of, 360 tons of hay and 50 acres of turnips, with the straw of 50 acres of wheat and 100 of barley. The 50 acres of turnips will stall feed 100 great oxen of 80 to 100 stone, (14 *lb.*) or 200 beasts of half that size; if the first, they must be bought in half fat, that is, such as have had the summer's grass: but I shall suppose the latter; they should be turned into the after-grass, fresh, for a month, which will forward them, having as much hay, every night, in the farm yard, as they will eat; as they must likewise have while stalled* at turnips: as to the quantity, I shall allow them a ton each, which is more than the fact. The beasts, may be supposed, bought in at 5 *l.* 10 *s.* and sold at 8 *l.*; consequently four of them (the number *per* acre) will pay
10 *l.*

* I speak here of their being all stalled, which is best, but if hovels (very ordinary ones will do) are not in sufficient plenty, then they must have the food in a warm yard (well littered) in cribs.

10*l.* profit, out of which is to be deducted 4 tons of hay; suppose at 30*s.* there remains 4*l.* for the turnips, which is the lowest any good acre of turnips can be calculated at, when all the expences of carting, &c. are considered, and also the advantage of the autumn grass.

Here let me observe that this is the only material point; whether the number of beasts be 4, or 2, or 3, *per* acre, matters not; I suppose 4, and allow each a ton of hay, as I would not be above the truth; the acre is of a given value whether it be eat by 4 or 3.

There yet remains 160 tons of hay, which must be consumed in the farm-yard by young cattle or other beasts—for them to be wintered on, and sold in the spring: as the making dung is the great object, I shall suppose the hay thus to pay 25*s.* a ton. It is not of consequence how it is applied, provided it be eat in the farm-yard; and dry hay will certainly pay that price in any application.

200 Head of cattle eating 50 acres of turnips and 200 tons of hay.—

And young cattle, &c. eating 160 tons of hay.

The

348 THE FARMER'S TOUR

The whole littered with 50 acres of wheat straw, 50 acres of stubble, and 100 acres of barley straw; which may be called 200 good loads—will make 3000 good loads of dung: all which I suppose to be carried on to the turnip land annually; it will cover the 100 acres at the rate of 30 loads an acre.

The general account of expences will be as follows.

Mowing, making, carting, and stacking, &c. 106 acres of hay, at 12s.	-	-	£.63	12	0
Ditto 129, at 10s.	-	-	64	10	0
One ploughing 60 acres wheat,	15	0	0		
Harrowing, feed and sowing, 12s.	36	0	0		
Reaping and har- vesting, 8s.	24	0	0		
Thrashing 3 quar- ters per acre,	18	0	0		
Carrying out,	3	15	0		
Cutting and carting the stubble, at 5s.	15	0	0		
				111	15 0
Three ploughings 100 acres of bar- ley -	75	0	0		
Harrowing, feed and sowing, 13s.	67	10	0		
Carry over,	142	10	0		

THROUGH ENGLAND. 349

Brought over	£. 142	10	0	239	17	0
Mowing and har-						
vesting 5 s.	25	0	0			
Thrashing 4½ quar-						
ters an acre,	22	10	0			
Carrying out,	11	5	0			
				201	5	0
Clover feed, sowing, and har-						
rowing, 7 s.	-			35	0	0
Four ploughings 100						
acres turnips, £. 100	100	0	0			
Seed, sowing, and						
harrowing,	10	0	0			
Manuring, carting						
30 loads an acre,						
turning over, fil-						
ling, and spread-						
ing: the chalk						
price of this						
country is 9 s. for						
30 loads, all ex-						
pences — 30						
loads a day car-						
ried, but I shall						
suppose 20; it is						
then 12 s. an acre	60	0	0			
Twice hoeing, sup-						
pose 10 s.	50	0	0			
Drawing and cart-						
ing 50 acres						
home to farm-						
yard, at 9 s.	22	10	0			
				242	10	0
Carry over,	-			718	12	0

350 THE FARMER'S TOUR

Brought over,	-	£.718	12	0
Shepherd,	-	15	12	0
Rent, tythe, and rates,	-	402	17	1
Attendance on cattle, suppose 10 men 5 months, at 1s. a day,	-	80	0	0
Total expences,	-	1217	1	1

Produce.

The sheep I shall calculate at 10s. a head profit, which, all advantages considered, is very low,	-	480	0	0
160 Ton hay, at 25s.	-	200	0	0
Profit on 200 fatting beasts, at 50 s.	-	500	0	0
50 Acres wheat, 180 quarters, at 6s.	-	432	0	0
100 of barley, 450 quarters, at 3s.	-	270	0	0
Total product,	-	1882	0	0
Expence,	-	1217	1	1
Profit,	-	664	18	11

It is here necessary to be observed, that nothing in this calculation is overstretched. The profit of the sheep is not near so high as what is made in many parts of the kingdom.

dom. The product of wheat, 3 quarters *per* acre, is by no means high, for it is to be considered, that it succeeds very quickly; the turnips which are manured for, very greatly; and that it has all the fold of 800 sheep. I am confident no practical good husbandman will think me extravagant in this product; and the same must be remarked on the barley. The whole arable in this course is so much favoured, that the crops cannot fail of being great: no two of corn come together; and all the clover is not sown with wheat; only 60 acres out of 100, so that 40 are sown with turnips after the clover. This, with the whole turnip land being manured, 30 loads an acre, and the fold of 800 sheep on the wheat, all together unite to constitute a farm much superior to any management now seen in *Dorsetshire*. If all these points are well considered, it will certainly be allowed that the whole must be in a constant state of improvement; and the crops of all kinds soon become much greater than I have supposed.

Profit of this management, £.664 18 11
Ditto by sheep, including the fold, 228 11 11

Superiority,

436 7 0

352 THE FARMER'S TOUR

From this comparison it appears how vastly more profitable the management here proposed is to that of this country; the superiority, itself, is near double the whole amount of the other: and I am very clear that I have, upon the whole, much underlaid the profit of the proposed improvements.

I shall in the next place calculate this farm under the idea of improving, merely, the general practice of this country, in keeping as many sheep as possible on a given space of land; for which end, I am confident, they cannot go the right way to work in keeping so much in grass, and growing so few turnips.

Suppose the farm divided thus.

26 Acres water meadow,	} mown, 84	Tons hay.
16 ——— fainfoine,		
<u>42</u>		

80 Upland meadow,
 65 Ditto,
 330 Clover,
 475 Pasture for 2375 sheep,
 148 Turnips for ditto.

Here the whole 660 acres are applied to raising sheep feed, in the same proportion

THROUGH ENGLAND. 353

as in the calculation before given. This cannot be effected without the arable being alternately in turnips and clover; the crops of both, in this way, cannot fail of being very great, from no exhausting ones being on the land. The expences will be as follow.

Mowing, &c. &c. 42 acres of			
hay, at 12s.	-	-	£.25 4 0
148 Acres of turnips,			
3 earths, at 5s.	£.111	0 0	
Seed, sowing, and			
harrowing,	-	4 4 0	
Hand-hoeing,	-	21 0 0	
			136 4 0
148 Clover feed, &c. &c. 7 s.			51 16 0
Two shepherds,	-		31 4 0
Rent, &c.	-		402 17 1
Total expences,	-		647 5 1

Product.

2375, at 10s.	-	-	1187 10 0
Expences,	-		647 5 1
Profit,	-	-	540 4 11
Ditto in the method now pursued,	-	-	228 11 11
Superiority,	-		311 13 0

354 THE FARMER'S TOUR

I think this account is sufficient to prove that, upon the *Dorsetshire* principle of keeping as many sheep as possible, they do not take the proper means to attain the end in view—they might evidently keep half as many sheep again as they do now, and with greater profit, from the ample supply of winter food.

These sheep I have supposed not to pay so much by 2s. a head as the others; this difference I make because their after-grass feed is inferior. Respecting the variations in the profit, *per* head, I am certainly very moderate.

At present it is,	-	£. 0	8	6
Improved system, all sheep,		0	10	0
In a tillage course,	-	0	12	0

This rise is very moderate.

I must here observe that the *Dorsetshire* management of sheep is, in other respects, inferior to that of several parts of *England*, where they keep as many, or more than I have here supposed to a given quantity of land, and yet made from 12s. to 20s. a head. I do not think it by any means difficult to state such a case: 15s. a head might certainly be made. Here they sell
 2 their

THROUGH ENGLAND. 355

their old ewes big, within a month or 6 weeks of their lambing, at about 20*s.* suppose. This seems to be selling them at the very time when they are coming into profit.

At *Sherborn* fair, in *July*, the wether lambs, $\frac{1}{2}$ year old, of this country, are sold at about 10*s.* each. Suppose them kept hardly through the winter and spring and following summer, folding them the whole time, and then fattening the following autumn and winter on the aftergrass, turnips and hay; by this method they would come to, at least, 25*s.* each; their wool to 3*s.* and a whole years folding: this is 18*s.* a head, profit, besides the fold; and being wethers, might be kept more in number than the ewes. It is very evident that this system would prove much more profitable than that at present followed here. I conversed with several very sensible people, on that point, and they allowed (winter fold considered) that such a conduct would prove much more profitable.

Thus much on the sheep husbandry of these farmers. I may not be minutely accurate in the preceding calculations; but I am confident that I am not far from the

356 THE FARMER'S TOUR

truth; and it appears very clearly that their management is extremely bad; either with a view to general improvements, which are most advisable, or to the keeping as many sheep as possible on a given quantity of land; they are equally wide of both marks; nor would I have these remarks thought the mere ideas of one individual; this is not the case; what I propose is the real practice of the best farmers of the kingdom; I therefore only recommend to *Dorsetshire*, what is practised with so great success in other counties, where the idea of keeping great stocks of sheep, without turnips, would appear to the full as absurd as I can possibly have expressed.

Mr. *Damer* has executed some improvements of a very important kind; he has inclosed, grubbed, cultivated, and manured 78 acres of waste furze land, 18 of which are laid down to sainfoine, and 60 thrown into the common course of husbandry. This improvement he has found very profitable, insomuch that he intends annually to extend it until the whole 450 acres are brought into regular cultivation.

The

The introduction of sainfoine will, undoubtedly, be of admirable use; these light loamy hills on chalk, are perfectly adapted to that grass, and will yield such crops, that no management of them can pay equally well.

In the culture of turnips also, Mr. *Damer* is quickly advancing beyond the common *Dorsetshire* customs. He has 40 acres, and some of them hoed, and intends increasing the quantity, and to hoe his whole crop. And for making the full advantage of his turnip crops, he is now erecting a very spacious farm-yard, with a long range of stalls for fattening oxen on turnips; and for the purpose of raising the more dung, he designs chopping all his wheat stubbles, and carting them to the yard for littering his stalls, which practice he has begun this year.

Hollow draining in a piece of low springy land of 40 acres, he has lately practised with very great success—These are all objects of importance, and cannot fail of having that effect which their worthy executor most wishes—improving

358 THE FARMER'S TOUR

the agriculture of an extensive neighbourhood.*

About *Milbourn St. Andrew's*, the seat of *Edmund Moreton Pleydell, Esq.* the husbandry is not very materially different from the nearer neighbourhood of *Dorchester*;

* Mr. *Damer* has erected at *Came* one of the best houses in *Dorsetshire*. It is from his own plan, and is equally convenient and agreeable. Plate XXVI. fig. 3. represents the principal floor, from which it appears that the apartments are perfectly well connected, and that the rooms are of a good size.

The hall is handsomely fitted up in plain stucco. In it is a picture of *Prometheus*, by *Michael Angelo Caravaggio*, in which the expression is very great but horrible.

The saloon is elegantly fitted up; the door cases, window frames, pannels, cornice, &c. carved and gilt ornaments on a light lead colour. The door case into the hall is extremely light; the cornice is supported by *Corinthian* fluted pillars: the whole very neatly executed. The cieling a gilt trailing on a light lead colour. An eagle in the center darts lightening of gold from behind a blaze of white inclosed in an ornamented oblong, and within as light and elegant a scroll as I have seen. The room is hung with very handsome tapestry, representing the history of *Diogenes*, in four pieces: the colouring strong and lively. The chimney piece of

THROUGH ENGLAND. 359

chester; they are chiefly sheep farms; in general about 150*l.* to 250*l.* a year; and the average rent 10*s.* From hence to *Blandford* 8*s.*

The course of crops,

- | | |
|-----------|-------------------|
| 1. Wheat | 4. Ray and hop- |
| 2. Barley | clover, fed three |
| 3. Oats | years. |

A a 4

And

of statuary marble; the cornice supported by terms: in the center of the frieze a tablet, *Alexander* crowning *Roxana*; a *bas relievo*, very well executed; and on each side a wreath of flowers. The glassés, slabs, sofa's, &c. are richly executed.

The drawing room is hung with crimson damask: the ceiling ornamented in the same stile as the other. The chimney piece extremely elegant; white marble ornaments on a ground of *Sienna*: over it a picture of dancing boys, by *Rubens*, incomparably fine: the brilliancy and delicacy of the colouring, which is harmony itself—the relief of the figures, and their most agreeable expression, render the whole piece quite captivating. I never saw a more pleasing picture by this master.

Over the chimney in the dining-room is a very fine *Morello*: it is a lad fearful of losing his cake by a negro, who is advancing to him. The unaffected nature and simplicity of the figures are great—their attitudes easy; and the colours fine.

In the attick story are nine bedchambers and dressing-rooms.

360 THE FARMER'S TOUR

And some few sow wheat on a broad clover lay only one year old. Wheat produces 2 quarters, barley 3 quarters, oats 3 quarters. Their clover wheat they find much better after mowing twice, once for hay, and once for seed, than after feeding through the year.

About *Melcomb*, some wheat is sown on summer fallow, on four-foot ridges, and they have a management that does them honour: it is shovelling all the furrows, and throwing the earth on the ridges, which is to deepen the furrows, to make them the better drains, and at the same time to raise the ridges. The fields thus finished have a most neat appearance, that must please every spectator.

The farm-yard management of manure is equally bad with the neighbourhood of *Came*. Chalk they use in large quantities, lay 80 loads an acre, a ton each, on new broken-up land; it lasts 20 years; they reckon it kills the roots of the furz, and that it would yield scarcely any crops if not chalked: the soil is a light loam on chalk.

The following are the particulars of
3 the

THROUGH ENGLAND. 361

the farm Mr. *Pleydell* keeps in his own hands.

5007. Rent	80 Ray-grafs, &c.
902 Acres	15 Sainfoine
467 Grafs	40 Clover
255 Arable	1340 Sheep
160 Down	20 Cows
70 Meadow	25 Young cattle
174 Ewe lease	25 Swine
63 Cow lease	10 Horses *
20 Plantations	3 Men
40 Wheat	1 Boy
40 Barley	8 Labourers.
40 Oats	

I again made enquiries into the profit of sheep: Mr. *Pleydell*'s flock, as above, is 1340, consisting of,

900 Ewes,
40 Rams,
320 Hogs,
80 Pur-hogs,

1340

His annual sale is,

300 Old ewes,	- -	£. 315	0	0
390 Lambs, at 10s.	-	195	0	0
Carry over,	-	510	0	0

* And eighty deer.

362 THE FARMER'S TOUR

Brought over,	£. 510	0	0
Ewes wool, 130 <i>weight</i> , each			
31 <i>lb.</i> at 20s.	-	-	130 0 0
Lamb's wool, 30 <i>weight</i> , at 20s.			30 0 0
Total,	-		<u>670 0 0</u>

Exactly 10s. a head.

As the deer, cows, horses, and hogs, have the same pasture as the sheep, it is requisite to value the whole. The following is Mr. *Pleydell's* account.

Sheep,	-	-	£. 670	0	0
Cows,	-	-	70	0	0
Swine,	-	-	15	0	0
Deer, equal to 160 sheep,			80	0	0
Horses,	-	-	40	0	0
Total receipt,	-		<u>875</u>	0	0

Which sum is the product of,	<i>Acres.</i>
Ewe lease,	175
Cow ditto,	63
Meadow,	70
Ray, clover, and sainfoine,	135
Down,	160
Total,	<u>675</u>

Six hundred and seventy-five acres yielding a product of 670*l.* is at the rate of
19s.

THROUGH ENGLAND. 363

19s. 10d. *per* acre. The account *per* acre will therefore stand thus.

Sheep, product, -	£.670	0	0
Fold; they go once over 30 acres, worth they say,	30	0	0
Total, -	<u>700</u>	<u>0</u>	<u>0</u>

N. B. They esteem the summer fold of but little consequence; much of this 30 acres not worth 20s. but the *Michaelmas* part of it being more, raises the average to the sum.

700l. from 675 acres, is *per* acre, - - - £.1 0 9

Deduct expences.

Rent is -	0	12	6
Sundries, such as shepherd, tillage, feed, hay-making, fences, &c.	0	2	6
Tythe and rates,	0	2	6
	<u>0</u>	<u>17</u>	<u>6</u>
Profit, -	0	3	3

Such is the profit here made by sheep!
Can it be necessary to make a counter estimate of what this land would produce, if it was thrown into an advantageous course

364 THE FARMER'S TOUR

course of crops? There can be no occasion; it must strike every reader, the least conversant in these matters, that the advantage would be infinitely superior. I minuted down the expences and produce of Mr. Pleydell's arable land, under its present course, and the clear profit *per acre per annum* is 12*s.* 3*d.*; very bad husbandry therefore is four times over more beneficial, than that worst management of all, their sheep.

The reason the profit by sheep is here so *very* low is, the want of turnips. I am surprised they can make any profit at all by that animal without green winter food.

The following is the account of another flock at *Milbourn*: it consists of,

720 Ewes,
250 Hogs,
30 Rams.

1000

The annual sale,

240 Old ewes, at 15 <i>s.</i>	£. 180	0	0
300 Lambs, at 7 <i>s.</i> 6 <i>d.</i>	-	112	10 0
750 Wool, at 20 <i>d.</i>	-	62	0 0
250 Hogs, ditto, at 1 <i>s.</i> 3 <i>d.</i>	-	18	15 0
Carry over,	-	373	5 0

THROUGH ENGLAND. 365

Brought over,	£. 373	5	0
With them run			
20 Cows,	-	-	50 0 0
20 Heifers,	-	-	10 0 0

N. B. There is not the more land allowed on account of these.

Total,	-		433 5 0
They have 500 acres, the rent,			350 0 0
Tythe,	-	-	25 0 0
Rates,	-	-	30 0 0
Shepherd,	-	-	18 0 0

Total,	-		423 0 0
--------	---	--	---------

Product,	-	-	433 5 0
Expences,	-	-	423 0 0

Profit,	-	-	10 5 0
---------	---	---	--------

If all the flocks of the county were taken, the result would be various ; but all tending to prove, that vast sums of money are annually lost here by sheep. The *Norfolk* farmers would in this country make ten times the profit that its own inhabitants do.*

From

* Mr. *Pleydell* has ornamented *Milbourn* with taste : the lawns about the house wave over the hills

366 THE FARMER'S TOUR

From *Milbourn* to *Milton-abbey*, the country is all inclosed, and the soil pretty good: for the following account of the husbandry about the latter place, I am indebted to the very obliging attention of *Lord Milton*.

Farms vary from 150*l.* to 700*l.* a year.

The average rent is 8*s.* 6*d.* an acre. The course of crops is the common *Dorset* round of,

- | | |
|-----------|-------------------|
| 1. Wheat | 4. Ray-grass and |
| 2. Barley | hop-clover, three |
| 3. Oats | years. |

Wheat yields on an average 2 quarters *per* acre, barley 3; and oats 3 quarters 3 bushels: they have scarcely any turnips.

In their manuring, the sheep fold is the principal dependance: they chop no stubbles; but stack some of the hay at home: chalk they lay on new land, 60 loads an acre;

hills very agreeably, and they are prettily spotted with clumps and scattered trees. On the top of the highest hill is a *Roman* camp very entire; the area is filled with a plantation of firs, and in the centre is a handsome obelisk, which has a very good effect when viewed from the house, and the other parts of the grounds. The country around is fine.

THROUGH ENGLAND. 367

acre; 5 horses and 3 men will carry 10 loads a day half a mile, which comes to 1s. 4d. a load.

Their flocks of sheep rise from 400 to 1700: the *Dorsetshire* system continues, of course the profit is contemptible: they do not allot more than 2 sheep to an acre of all sorts of grass, which is upon the whole such a poor stock, that it must be owing to the want of turnips; they are obliged to let the flocks eat down the young spring shoot as fast as it rises, which utterly destroys the product of the ensuing crop. They state the average circumstances of a flock of 1000 ewes in the following manner.

320 Old ewes, sold at 16s.	£. 256	0	0
500 Lambs, at 6s.	-	150	0
Ewes wool 100 weight, at 19s.	95	0	0
Lamb's ditto, at 19s.	-	35	12
Folding 30 acres,	-	30	0

Gross product,	566	12	6
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From which is to be deducted all expences of rent, tillage for grass, seeds, hay-making, shepherd, &c.

They fold them during summer for wheat;

368 THE FARMER'S TOUR

wheat; and the wethers in winter for barley.

Throughout this country they have as vile a management of the dung they make in their yards, as can be conceived. They carry it on to the land for wheat, in *June* or *July*, and let it lie on the surface till wheat sowing, spread to every beam of the whole summer's sun; and most excellent dung it must certainly be by that time they plough it in. This is to the full as barbarous as the wild *Irish* burning their dunghills, in order to come at their virtue.

The dairies here are all let at about 4*l.* a cow, for which the dairy-man has not only the cows, but also the farm yard for his swine, and likewise the keeping of a mare and colt.

In their tillage they reckon 6 horses necessary for 100 acres of arable land; use 4 in a plough, and do an acre a day, 5 inches deep; the price 7*s.* 6*d.*

There are many large copses here, which are reckoned to pay from 8*l.* to 12*l.* per acre, at 14 years growth.

Land tax at 4*s.* is 2*s.* and poor rates 2*s.*

Particulars of a farm.

1800 Acres in all	30 Wheat
180 Arable	30 Barley
1620 Grass	30 Oats
700 <i>l.</i> Rent	90 Ray-grass
1700 Sheep	2 Men
8 Horses	2 Boys
8 Draft oxen	2 Maids
30 Cows	10 Labourers.
60 Young cattle	

Lord *Milton* keeps a very large farm in his own hands: the particulars of it will shew that he is one of the most considerable farmers in this country.

3000 Acres in all.

1000 Wood.

500 New plantations.

1380 Grass and sainfoine.

120 Arable.

800 Ewes,

300 Wethers,

300 Hogs,

30 Rams,

6 Horses.

23 Cows.

} 1430.

His lordship being very justly struck with the trifling advantage reaped from the common methods pursued in this country,

has aimed at two points in particular: first, to introduce sainfoine for the chalk hills, under the persuasion of its yielding a much greater profit than the present application; and secondly, to bring in the practice of hoeing turnips. These two points he has conducted in a very judicious manner: he has sown a large field with sainfoine, and prepared the land so thoroughly well by repeated ploughing and harrowing, that he got it perfectly free from weeds, that a failure might not be attributed by the farmers to a fault in the grass itself, which would have been their idea, had the error been sowing it on foul land. It has succeeded so well as to yield above half a ton of hay *per* acre the very first year, which is sufficient to shew that full success will attend the experiment, and the strongest proof in a few years gained, that this excellent grass would pay ten times more profit, than the farmers make from their usual management, which is to leave their hills in sheep-walks, and flock them with two sheep *per* acre.

In the introduction of turnip hoeing, even on his own farm, some difficulties were

were found : his men, unused to the culture, did not approve a refinement on it. This passed for some time ; but this year his lordship ordered half a field to be hoed, and the other half left to grow in the *Dorsetshire* manner : the bailiff is converted, and now owns that some good may be had by turnip hoeing. A continuation of this conduct can scarcely fail of rendering the practice common.

As lord *Milton* is desirous of keeping a large flock of sheep, not so much with a view to profit as the beauty of his lawns, which are very extensive, he designs a flock of wethers only, for the sake of a constant fold on his new-laid grounds ; and as his arable is disproportioned to the quantity of his grass, he proposes trying turnips every year on it : 120 acres of that root will be of noble utility, and, with such an extent of pasture, will prove much more profitable than any corn crops. But here I cannot help recommending to his lordship the culture of the great *Scotch* cabbage, which will yield much more food than turnips, and of a more valuable kind ; particularly for sheep, as it will last so late

372 THE FARMER'S TOUR

in the spring, as to carry them on till the grass has a full bite for them, or the 10th or 12th of *May*.

The public is not a little indebted to this nobleman for attending with so much propriety to the improvement of the husbandry of *Dorsetshire*; and the method he has taken for effecting so patriotic a view, deserves the sincere applause of its well-wishers.*

I returned

* Lord *Milton* is making many improvements at *Milton-abbey*, of the most striking kind, which will so happily unite with the natural beauty of the grounds, as to render the whole uncommonly fine.

The great peculiarity of the place is a remarkable winding valley, three miles long, surrounded on every side by hills, whose variety is very great. It is all lawn; and, as the surface has many fine swells, and other gentle inequalities, the effect is every where beautiful. The hills, on one side, are thickly covered with wood, from the edging of the vale itself, quite spreading over the tops of the hills: these continued sweeps of hanging woods are very noble. In some places they form bold projections, that break forward in a great stile: in others, they withdraw, and open fine bosoms of wood, which are as picturesque as can easily be imagined.

I returned westward from *Dorchester* towards *Bridport*, passing through the very remarkable farm of Mr. *Hardy*, a few miles from *Dorchester* : it is the largest in *Dorsetshire*, and consists of the following particulars.

11000 Acres in all	60 Horses
1600 Arable	16 Draft oxen
9400 Grass and	200 Cows
down	300 Young cattle
3000 <i>l.</i> Rent	13000 sheep
50 Watered	100 Swine
meadows	40 Fat beasts
200 Wheat	1 Man
400 Barley	1 Boy
300 Oats	2 Maids
300 Turnips	200 Labourers.
400 Broad clover	

gined. Throughout the whole, the union of lawn and wood is admirable.

On the other side the vale, the hills are partly bare; but are clumped with new plantations, and scattered with single trees and thorns, contrasting the continued woods on the opposite hills, in the boldest manner. The riding that surrounds the amphitheatre rises the hill on this side, and, skirting the edge of it in the way to the house, looks down on the vale, and has a full command of the vast range of wood, which

374 THE FARMER'S TOUR

The flock of 13000 sheep consists of,

5000 Ewes	2000 Wethers
4000 Lambs	2000 Hogs.

And the annual produce is,

2000 Lambs, at 10s. 6d.	£. 1050	0	2
2500 Old ewes, at 21s.	2625	0	0
1200 Wethers, at 21s.	1260	0	0
Wool, - - -	1520	0	0
Total - - -	6455	0	0

hang on the other sides of the other hills. One of the views is uncommonly fine: it is a projection of the opposite hill; the sloping bend fringed with a filleting of wood, and the crown of the hill a lawn scattered with single trees gently hanging to the eye: a landscape truly pleasing.

In other places, you look down steep winding hollows, in which romantic clumps of wood seem swallowed up by the impending hills.

On rising the hill, if you turn the other way, towards the head of the vale, you look down from without the wall, commanding all the waves of the lawn at bottom, which form a most pleasing scenery, and look full into a vast amphitheatre of wood, which terminates the vale: the view nobly romantic.

From the top of the hill, full northwards, is a very great prospect over the vale of *Black-moor*: innumerable inclosures are spread forth to the eye; the whole bounded by distant hills: a view

THROUGH ENGLAND. 375

From *Lady-day* to *Midsummer* he folds them all. From *Midsummer* to *Michaelmas* 5000 ; and from *Michaelmas* to *Lady-day* 2000 wethers.

The fold of 1000 is reckoned here at 15s. a night,

13000 Folded 1 quarter of a year,

at 15s. per 1000, £. 887 5 0

5000 Ditto 1 quarter, at ditto, 341 5 0

2000 Ditto 1-half, at ditto 273 0 0

Total, - - - 1501 10 0

6455 0 0

Total of sheep including fold, 7956 10 0

a view similar to those I mentioned having seen from the downs in *Sussex*.

The abbey is one of the most ancient buildings in *England*, being founded by king *Atbelstan*: it joins an old church, which is yet of a great size, but was once as large as most cathedrals. It is a very fine *Gothic* building, and has a fret-work ceiling in stone, remarkably light. The situation of these edifices is very fine: it is a regular knole, which swells boldly in the middle of the grand amphitheatre, formed by the surrounding hills: an instance out of many of the judgment with which the monks chose their situations. In one of the rooms is a most agreeable copy of *Titian's* famous *Venus* in the *Tribuna* at *Florence*: the soft tender delicacy of

376 THE FARMER'S TOUR

This sum appears at first sight to be a vast receipt in one article on one farm; but if the immense extent of land be considered, and the advantages to be made of that extent by another mode of husbandry, it would be found a very inferior product.

I should

the colouring, which is animated nature, is bewitching; the grace and ease of the attitudes are also most happily caught.

His lordship designs soon to build a very magnificent house in the *Gothic* stile, for the better uniting with the church.

Few great houses have a finer approach: his lordship has cut and formed a spacious road for six miles through his grounds, leading from *Blandford, London, &c.* It passes chiefly through his vast woods, which, as they cover the sides of hills, open in various places, and let in most agreeable views of the neighbouring and the distant country. This road is nearly finished, likewise several more, with others begun.

All the home grounds are to be walled in, which will be a circuit of 16 miles, half of which are done; and the tops of the hills all planted with a great variety of trees, to the amount of 500 acres. The whole of these works are conducted in a great stile, with equal taste and spirit: they are an ornament to the whole country, and do honour to their noble proprietor.

I should remark on this vast farm, that its size being out of all proportion to the attention of one man, Mr. *Hardy* is going to lessen it considerably; and there is no doubt, but a man by good husbandry might, on a much smaller tract, much exceed so large a one in profit.

This farmer however, notwithstanding the greatness of his business, has made considerable improvements in cultivating black sandy heath (ling) and furze hills; and he has done it by paring and burning, and sowing turnips, of which he gets good crops; then he takes one crop of Lent corn, which is also a beneficial one, and lays down to ray-grass and clover; this has been land of not six-pence an acre, and has answered very greatly.

It is observable, that he sows his wheat on broad clover one year old, without ray-grass, and finds the custom very profitable. This I think confirms my remark, that the rage for ray-grass, common in this country, is erroneous, even in the opinion of their own good farmers.

Farmer *Masterman* is another great occupier

378 THE FARMER'S TOUR

pier near *Dorchester* : he rents above 2000 l. a year.

Farmer *Nicholls* is a third ; and I should also remark, that these men are reckoned the best husbandmen in this part of the country, and from what I could hear of them, they deserve the character.

The last four miles to *Bridport*,* the land is all extremely rich, lets at 40s. an acre. The course of crops is,

* A little out of the road from *Dorchester* to *Bridport*, near the former town, and in the way to *Weymouth*, are two very famous objects : one the most complete *Roman* encampment in *England*, contains circumvallations, called *Maiden-Castle* ; and the other a remarkable amphitheatre of earth : they are well worth a traveller's observation. At the turnpike, about half way between *Dorchester* and *Bridport*, begins one of the finest landscape countries to the left I ever saw : you there look over a vale bounded by waving hills, all cut into inclosures of the finest verdure, the sea picturesquely breaking above the hills. Mounting the hill, till you come to the 6th mile-stone to *Bridport*, you find a spot that is amazingly elegant : it is a circular hollow scoop in a vast hill of the most beautiful soft green that can be imagined ; the waves in it have exactly the appearance of that softness, which is seen in the driven snow. The bottom of the hollow is cut into little stripes of cultivation, which,

- | | |
|-----------|------------------|
| 1. Fallow | 4. Oats |
| 2. Wheat | 5. Tares |
| 3. Barley | 6. Rye for seed. |

There are also some turnips grown here ;
but no hoeing. Their crops are,

Wheat 30 bushels.

Barley 32.

Oats on the worst land 30.

Turnips worth 30s.

But

which, from the vast depth of the declivity, have a picturesque appearance. In front, beyond it, are beautiful sweeps of inclosures, that keep a perpetual waving line, forming the happiest outline to the sea that can be imagined. To the right, the view is bounded by distant craggy points that project very abruptly to the sea.

Leaving this very fine spot, and following the road down the hill, you catch to the right a most peculiar landscape: a bold, circular, regularly-swelling hill, rises out of a vast hollow in the down; the effect uncommonly magnificent, and would be more so, if a few places in it were not scarred with chalk. Immediately under the hill, a little tuft of inclosures, that seem tossed into the hollow, wild and pretty. Pursuing the road towards *Bridport*, till you come a little beyond the fifth mile-stone, you overlook a very large vale, inclosed on every side by high hills; and, what is uncommon, the valley itself all swelling ground,

380 THE FARMER'S TOUR

But their principal husbandry is that of hemp and flax; they break up grass land for flax, giving 4*l.* or 5*l.* *per* acre rent; and the crops vary from nothing to 15*l.* an acre; the average about 10*l.* They use *Riga* seed, which is dear; but never weed the crops. They sow corn after it, and get very great crops; and then hemp, for which they manure with dung and lime, 15 loads an acre of rotten dung: never weed it, as the hemp kills all. It is sold on the land to the poor people, who pull, bleach and scane it: the price as it grows from 10*s.* to 5*l.* 5*s.* The buyers sell it in the market in scanes. There are many hundred

ground, that rises and falls in gentle inequalities. In the center rises a bold swell; one of the finest situations I have seen for a great house. From hence, the whole way to *Bridport*, is a perpetual picture: all hill and dale, some boldly abrupt, some gentle and more pleasing; the whole tossed about in the wildest manner imaginable, all cut into inclosures, the hedges well fringed with trees, and every landscape different, but striking.

A more varied or more beautiful country is no where to be seen in *England*, than from the first turnpike out of *Dorchester*, all the way to *Bridport*, and well worth a long journey to see.

THROUGH ENGLAND. 381

hundred acres in this neighbourhood. Wheat is sown after it, which seldom fails of being a great crop: 40 bushels *per* acre are common.

The grafs lands, both meadows and marshes, are very rich, and let from 30s. to 3*l.* an acre. The soil is a rich deep red or black loam: an acre that is very good will summer feed seven or eight sheep; and some will carry 2 cows an acre. It is also applied to fatting many bullocks. Seventeen acres kept,

25 Horses,

7 Bullocks,

70 Sheep,

for six weeks, in the spring; it was then mown for hay; the crop 2 $\frac{1}{2}$ tons *per* acre, and the after-grafs was worth 15*s.* an acre; rent of the land 3*l.*

25 Horses, 5*s.* a week is paid

here, but I shall suppose it

only 2*s.* 6*d.*

7 Bullocks, at 2*s.* 6*d.*

70 Sheep, at 3*d.*

42 $\frac{1}{2}$ Tons of hay, at 30*s.*

After-grafs,

Total,

Which is *per* acre

£. 18 15 0

5 5 0

5 5 0

63 15 0

12 15 0

105 15 0

6 4 4

382 THE FARMER'S TOUR

This was not mentioned as a very extraordinary thing, many fields being equal, and some superior.

At *Abbotsbury* 104 cows are let at 5*l.* 5*s.* a cow.

This rich vale of land runs many miles into *Somersetshire*.

From *Bridport* I went to *Mapperton*. Had Mr. *Broadrep* been at home (to whom I had a recommendation) I should have been able to have given a more particular account of the husbandry of the neighbourhood; but the following particulars were supplied by his tenant.

Farms from 100*l.* to 500*l.* a year; the soil in general very rich, either sandy loam, or clay, but both equally good; the rent from 10*s.* to 20*s.* an acre, average 16*s.*

To *Bridport*, 20*s.*

All around *Brammerton*, 20*s.*

To *Sherborn* and *Yeovil*, 20*s.*

To *Dorchester*, 10*s.*

The courses of crops here,

- | | |
|------------------|-------------|
| 1. Turnips | 4. Wheat |
| 2. Barley | 5. Barley |
| 3. Clover 1 year | 6. Vetches. |

Also,

- | | |
|--------------------|--------------|
| 1. Hemp | 4. Wheat |
| 2. Wheat | 5. Barley or |
| 3. Beans or barley | vetches. |

Very little summer fallow.

The average crops of wheat, 2 quarters.

_____ of barley, 3 quarters.

_____ of oats, 4 quarters.

_____ of pease, $1\frac{1}{2}$ quarters.

_____ of beans, 3 quarters; none
hoed.

Nor are the turnips hoed. The account
of the hemp they state thus:

Four ploughings, harrowing and
sowing, - - -

30 Loads of dung, - - -

Carriage, - - -

Seed, - - -

Rent, &c. - - -

Total, - - -

£.	1	0	0
	1	10	0
	0	15	0
	0	8	0
	1	0	0
	4	13	0

And they reckon it about pays the expence,
sometimes more; they use it, they say,
chiefly for cleaning the land, by its great
power in killing weeds. The crops are
14 or 15 wt. at 32 lb. from 8s. to
10s. 6d. a wt.

The

384 THE FARMER'S TOUR

The following is the account of flax.

Three ploughings, &c.	£. 0 15 0
Seed, - - -	1 0 0
Rent, &c. - - -	1 0 0
Weeding, - - -	0 4 0
Hacking, - - -	0 2 0
Total, - - -	3 1 0

And the crop, like hemp, sold on the ground, at 5*l.* or 6*l.*; on an average, a common crop is 25 dozen pounds, at 4*s.* 6*d.*

They depend much on lime for manuring lands; they lay 20 hogheads on an acre, each 4 bushels, at 20*d.* a hoghead; but always mix it with earth: they turn over the heap of earth once before they lay the lime to it, and once afterwards: it lasts good 4 or 5 years; and they reckon it the best of husbandry. Only stone lime used.

They never chop their stubbles, but they cut pretty close.

Their best grass is for dairies: they let their cows at 4*l.* but the dairy-man has all the farm-yard for his pigs. The produce is about 6*l.* per cow.

Flocks

THROUGH ENGLAND. 385

Flocks of sheep rise from 100 to 700; they are all ewes. The profit they reckon at,

Lamb,	-	£.0 : 7	0
Wool,	-	0	2
		0	9
		0	9

They do not clip their lambs. Out of 1000 ewes they will sell annually 300 old ones, at 14s. and 650 lambs, at 7s. They do not fold them above half the year.

In their tillage they reckon 8 horses necessary for 100 acres of arable land; use 4 in a plough, and do an acre a day.

Tythes are both compounded and gathered; if the former, it is 2s. in the pound: rates 1s. 3d.; land-tax at 4s. is 9d.*

The

* Opposite the gate turning into Mr. Broadrep's grounds, is one of the most beautiful landscapes ever seen. It is a small winding vale, so far beneath the point of view, that every field, hedge, and tree, is distinctly commanded by one stroke of the eye. It is bounded on every side by cultivated hills; that on which you stand, so steep a declivity, as to be perfectly romantic. The whole ground consists chiefly of grass, whose verdure emulates the brightest green: In

386 THE FARMER'S TOUR

The hemp of all this country is made into sail-cloth, at *Bridport*, for the use of the navy: it employs several hundred hands: men earn 6*s.* to 8*s.* a week; women 3*s.* 6*d.* to 5*s.*; and boys and girls, from 9*d.* to 2*s.* 6*d.*

The country continues rich most of the way to *Axminster*. About *Abbots Wooton*, *Hawkchurch*, *Berne*, *Moorcoomb's Lake*, and *Wooton Fitzpaine*, farms are generally small;

some spots, thickets of trees seem to sink in hollows between the hills; in others they spread thinly over the hanging lawns, and admit the turf, illumined by the sun, to cast the liveliest tints through their straggling branches. A farm tufted by a few elegant trees, and backed by a swelling lawn, has a pleasing effect. A cottage, and a barn half obscured, add to the scene. On one side the vale a large wood spreads over the side of a hill.

It is, upon the whole, a charming landscape. The waving lawns have every variety of surface that can render them picturesque: the hedges, thickets, and tufts of trees, seem scattered by the hand of fancy; and these agreeable touches are infinitely heightened by the boldness of the declivity, which is considerable enough to lessen every object from being so far beneath the eye.—It is one of those most peculiar landscapes, which, without water, strikes the imagination so forcibly, as to prevent your discovering the absence of it.

THROUGH ENGLAND. 387

small; from 10*l.* and 20*l.* to 150*l.*; a few to 300*l.* The soil is either a clay, a good rich loam, or stoney land. It lets from 12*s.* to 20*s.* an acre; grafs 20*s.*; and arable 13*s.* or 14*s.* But the rents will best appear by the following particulars of severall of lord *Milton's* farms in those parishes, with which his lordship favoured me when he understood that I was going through this country.

<i>Farms.</i>	<i>Acres.</i>	<i>Rent.</i>
No. 1. Arable, 59	—	11
Grafs, 157	—	11
Wood, 2	—	11
—	218	£.105
2. Arable, 136	—	11
Grafs, 187	—	11
Wood, 17	—	11
Orchard, 11	—	11
—	253	130
This orchard of 11 acres yields 40 hogsheads of cyder on an average; and in good seasons 80 or 100; the price from 16 <i>s.</i> to 20 <i>s.</i> each.		
Carry over,	471	235

388 THE FARMER'S TOUR

<i>Farms.</i>	<i>Acres.</i>	<i>Rent.</i>
Brought over,	471 —	£.235
No. 3. Arable, 35		
Grafs, 113		
Orchard, 2		
	152 —	60
4. — —	30 —	25
5. — —	24 —	16
6. All grafs,	117 —	60
7. — —	112 —	50
8. — —	52 —	24
9. — —	30 —	30
10. — —	16 —	14
11. — —	12 —	12
12. — —	28 —	8
13. — —	29 —	20
14. — —	15 —	14
15. — —	11 —	10
16. Wood, 8		
Orchard, 7		
Grafs and		
arable, 177		
	192 —	130
17. Wood, 2		
Orchard, 6		
Arable and		
grafs, 119		
	127 —	80
18. — —	84 —	37
19. — —	118 —	70
20. — —	65 —	40
21. — —	46 —	31
Carry over,	1731	966

THROUGH ENGLAND. 389

<i>Farms.</i>		<i>Acres.</i>		<i>Rent,</i>
	Brought over,	1731		£.966
No, 22.	—	26	—	27
23.	—	17	—	12
24.	—	21	—	19
25.	—	20	—	14
26.	—	29	—	29
27.	—	6	—	7
28.	—	43	—	10
29.	—	26	—	17
30.	—	32	—	20
31.	—	111	—	68
32.	—	87	—	50
33.	—	31	—	25
34.	—	123	—	60
35.	—	37	—	28
36.	—	53	—	31
37.	—	35	—	35
38.	—	26	—	20
39.	—	15	—	20
40.	—	32	—	15
41.	—	53	—	36
42.	—	76	—	45
43.	—	98	—	49
44.	—	59	—	20
45.	—	12	—	10
46.	—	14	—	14
47.	—	27	—	9
48.	—	15	—	4
49.	—	40	—	15
50.	—	51	—	35
	Carry over,	3096	—	1719

390 THE FARMER'S TOUR

<i>Farms.</i>		<i>Acres.</i>		<i>Rent.</i>
	Brought over,	3096	—	£.1710
No. 51.	—	103	—	40
52.	—	11	—	7
53.	—	11	—	7
54.	—	8	—	6
55.	—	21	—	8
56.	—	5	—	4
57.	—	21	—	8
58.	—	8	—	4
59.	—	31	—	13
60.	—	16	—	8
61.	—	13	—	10
62.	—	31	—	26
63.	—	37	—	30
64.	—	49	—	37
	Total,	3461	—	£.1918

These are on an average 11s. 1d. an acre—but the farms, except the small ones, are under let. It is very observable, that the little farms are more than double the rate, *per acre*, of the large ones; if the buildings, therefore, are no larger than necessary, it is plain that small farms pay a landlord much better than large ones.—How much the greater ones could be raised, does not appear, but in all probability much. The following is an observation made

made by the surveyor who planned the estate; it is evident from thence, that better husbandry would pay better rents.

“ And therefore I think it necessary to observe, as a hint for the whole survey, that the value of the farms and tenements cannot be ascertained from the circumstances, or report of the tenants; many speak truth in alledging their poverty, their small gains, and hard bargains; but on a true enquiry into the cause, the fault will center in themselves, not in the land, it being impossible that ground should produce plentiful crops without proper care and maintenance, let it be of ever so fertilizing a nature. By dint of bad husbandry, and neglect, the respective soils, in general, are all impoverished—drains stopt, and the fences spread to such a degree, that scores of acres are rendered entirely useless; therefore, no wonder if the occupiers are in low circumstances.”

The manufacture of carpets at *Axminster* is chiefly done by women and girls; they have a clothing trade which employs the men.

392 THE FARMER'S TOUR

The land about the town is very good; the tract on the river lets at 2 *l.* or 3 *l.* an acre; and all inclosures from 15*s.* to 20*s.* They apply themselves more to dairying and fattening beasts than to tillage. Cows let from 4 *l.* to 5 *l.*; for which they have the benefit of the farm-yard for their swine, and the keeping a mare and colt; and they generally sell the sucking foal for 6 *l.* at 5 months old.

The beasts fattened here are the west-country breed; but dairying pays best; the total product of a cow 6 *l.* or 7 *l.*

There are some turnips here, but none hoed; their course, in general, is three crops of corn and three of grass.

Most of the town and its neighbourhood is leasehold estates; the price 15 years purchase, and a renewal 3 years purchase.

Towards *Chard* the land continues very good: about three or four miles from *Exminster* the course is,

- | | |
|-----------|-------------------------|
| 1. Fallow | 4. Clover and ray-grass |
| 2. Wheat | 3 to 6 years |
| 3. Barley | 5. Wheat. |

Wheat yields, on an average, 20 bushels; barley 30; oats as much. There are many turnips,

THROUGH ENGLAND. 393

turnips, but none hoed; yet they sell at 40 s. an acre. But the principal part of the country is grafs land; there are many dairies of cows, from 10 to 40 in a dairy; they let from 3*l.* 15 s. to 4*l.* 4 s.: an acre will summer feed a cow. Some farmers fatten middling sized heifers, and reckon it more profitable than letting their cows; but cows would be best if they were not let. There are very few sheep in the low rich lands, which are apt to rot them. There are some tracts of watered meadows that let from 25 s. to 40 s. an acre.

Here are some orchards; an acre in a good year will give 20 hogsheads; but in some not more than 3 or 4; the average is 40 hogsheads from 6 acres, at 21 s. each: apples sell at from 1 s. to 2 s. a bushel.

About *Leigh* and *Winsham* farms rise from 20*l.* to 150*l.* a year. The soil is a strong rich clay on gravel or flint; lets from 10 s. to 20 s. an acre; average 12 s. 6 d,

To *Axminster* 18 s.

To *Taunton* 16 s.

To *Ilminster* 13 s.

The general course here is,

1. Wheat

2. Barley

3. Ray-grass and
hop clover 2 years.

394 THE FARMER'S TOUR

Ray-grass they call *ever* grass.

- | | |
|-----------------|--------------------|
| 1. Wheat | one year |
| 2. Barley | 4. Wheat |
| 3. Clover alone | 5. Barley or oats. |

These, it must be confessed, are blessed courses.

Farmer *Cooper*, one of the tenants of *Henry Cornish Henley, Esq. of Leigh*, who he brought from his estate in *Norfolk*, uses a course that is wonderfully different.

- | | |
|------------|-----------|
| 1. Turnips | 3. Clover |
| 2. Barley | 4. Wheat. |

The crops of wheat are, on an average, 20 bushels; barley 20 to 30; but few oats; the produce 24. For turnips they plough three times; none of them hoe—but here is an anecdote worth mentioning.

The above-mentioned farmer *Cooper* has occupied a farm at *Leigh* 18 or 19 years: on his first coming from *Norfolk*, with his head, it may be supposed, full of turnips and hoes, he was highly disgusted at the husbandry of his neighbours; and immediately determined to carry on a better system. His first object was to make turnips a regular crop in the course, and to hoe them twice, in the *Norfolk* manner: he met with many
diffi-

THROUGH ENGLAND. 395

difficulties from the perverseness and awkwardness of his men; but by working with them himself, and never giving up the scheme a single year, he, at last, got the better, and has for many years hoed his crops well and regularly; they have answered accordingly; and at the same time that they yield him infinitely more food than his neighbours, his succeeding ones of barley are far cleaner and better. Of these facts they have now been regular witnesses near 20 years, and yet I could not find that one man had imitated him: so flagrant an instance of stupidity and prejudice, that were I possessed of an estate in this country, not a soul of them should remain an hour after the next crop of unhoed turnips. It is intolerable; and a satire on the landlords for not exerting more spirit in a matter of such real importance.

The average value of their unhoed crops is 30s.

Some of their clover is mown, and some fed; the crop of hay 1 to 1 $\frac{1}{2}$ ton. They have no sainfoine, although the upper lands
are

396 THE FARMER'S TOUR

are all on a rock, and would do admirably well for that grass.

The larger farmers fold their sheep in the summer; the smaller ones not at all. They use a good deal of lime; 10 to 20 hogheads an acre, at 2 s. a hoghead at the kiln; but they always mix it with earth. It lasts 3 crops; and they find it a great improvement; but the use decreases, from the measure of coals growing smaller, at the same time that the price rises. They have no chalk or marle. No chopping of stubbles; and the hay is stacked about the fields.

The best grass land lets from 20 s. to 40 s. an acre: It is chiefly applied to the dairy; 1 $\frac{1}{2}$ acre, and 1 of after-grass, is the stint *per* cow. The breed of the cattle the short-horned; they give about 6 lb. of butter *per* week. They let at 5 l. 15 s.; the dairy-man has the swine, and the keeping a mare and colt; their profit is 40 s. a head. The winter food straw and hay: to 20 cows they allow 20 tons of hay, and 25 to 30 acres of barley straw.

Flocks of sheep rise from 100 to 700. The profit;

THROUGH ENGLAND. 397

Lamb,	-	£. 0	9	6
Ewe's wool,	-	0	2	6
Lamb's ditto,	-	0	1	3
		0	13	3

The hill farmers winter them in the dairy farms, at the rates of, ewes 6 s. 6 d. hogs 4 s. They think the rot is owing to stagnating water on low lands; and much rain, in summer, on clay lands.

In their tillage they reckon 6 horses necessary for 100 acres of arable land: they use 4 in a plough, and do 3 roods a day, from 2 to 5 inches deep; the price from 4 s. to 6 s. an acre. In this instance, also, farmer *Cooper* has set them an example, which none have followed.

He has a *Norfolk* plough, with which his son and a pair of horses, without a driver, ploughs an acre in the same time that they, with 4 horses and a driver, do $\frac{1}{2}$; yet not a man will touch it, or endeavour to learn to use a tool that so evidently saves such considerable sums of money. They know nothing of cutting straw into chaff—nor are there 3 farmers in 20 that do not throw away all the chaff of their crops.

398 THE FARMER'S TOUR

They use more draft oxen than horses; 6 in a plough; which do the same work as 4 horses, but are kept much cheaper. Mr. Cooper, above-mentioned, though a *Norfolk* man, and came here much prejudiced against them, is become such a convert, that he has parted with most of his horses; has now only 4, but keeps 12 oxen; while idle they have nothing but straw, but when worked, hay. I enquired of him, particularly, into this part of his business, and he assured me they found them all, beyond comparison, cheaper than horses: he said, if he was forced to keep horses alone, he should not be able to pay his rent.

Almost every farm here has either an orchard, or many apple trees in the hedge rows. An acre yields from 5 to 30 hogsheds of cyder; but they never bear two years running; they have but one crop in two years; the average product, in a bearing year, is 16 hogsheds; so they yield 8 *per ann.* The price, on an average, is 16s. but the farmer finds casks, and carries the cyder some miles. A man who has 6 acres of orchard, must have 50*l.* in stock, in casks.

The

The orchards let at 40s. an acre. They are from 15 to 20 years before they become profitable. They are planted 30 feet square.

Ten bushels of apples make a hoghead; the picking and making cost them 3s. a hoghead.

They reckon the soil is here as much as the kind of apple; the stronger the clay, the better the cyder.

As I was here approaching the manufactures of *Somersetshire*, I enquired if the high price of corn had induced any body to plough up their pastures or meadows. Ploughing up meadow they treated with contempt, and assured me that the turn here was so much that of laying land down to grass; that in a very few years the whole country would be nothing else. In this idea the landlords and tenants unite; but the former will not allow the rough bad grass to be ploughed up, even with a view to laying it down better; which is a great fault: under proper restrictions, to prevent them from taking successive corn crops, breaking up such ground would be of great utility. Let me here observe, that no grass is allowed to be broken up in *Dorsetshire*:

all

400 THE FARMER'S TOUR

all the cow and ewe leases—sheep slaughts, &c. &c. are covenanted to remain as they are, under a penalty of 5*l.* an acre: nor did a single farmer, with whom I conversed, express any desire to plough up. This is somewhat remarkable; for corn is always considerably higher in *Dorsetshire* and *Somersetshire*, than in the eastern counties; and yet in the latter they would, if permitted, plough up almost every acre. Is there not reason, from hence, to imagine that the high price of corn is not the spring which actuates them in this case?

In the hiring and stocking farms, they reckon 300*l.* necessary for 100*l.* a year.

Tythes are generally compounded.

Wheat, 4*s.*

Barley, 3*s.*

Oats, pease, and beans, and fetches,
2*s.* 6*d.*

Poor rates 20*d.* in the pound; 20 years ago 12*d.* The employment spinning. All drink tea.—

Most of the farmers have leases, but many landlords will give only for 3 years, and a few for 7. This is a great discouragement to good husbandry: let them raise their

THROUGH ENGLAND. 401

their rents as high as they please ; but the tenant should have a certainty of reaping the profit of any improvements he is induced to make.

LABOUR.

In harvest, 1 s. to 1 s. 4 d. and cyder.

In hay-time, 1 s.

In winter, 10 d.

This appears very cheap ; but they assured me the farmers were worse off, than if rates of labour were higher ; the labourers do very little ; they won't go to work before 8 o' clock in the morning ; are long at their meals, and go home early ; 1 s. 2 d. for a fair day's work, they say would be cheaper.

Reaping, 4 s. to 4 s. 6 d.

Mowing corn, 1 s.

— grass, 1 s. 6 d. and cyder.

Thrashing wheat, 5 d. to 6 d. a bushel ; but they draw the straw for thatching.

— barley, 2 d.

— oats, 1 d. $\frac{1}{2}$.

Head-man's wages, 7 l.

Next ditto, 5 l. 10 s.

Lad's, 4 l.

Dairy-maid's, 3 l.

VOL. III.

D d

Other

402 THE FARMER'S TOUR

Other ditto, 3*l.* 10*s.*

Women a day in hay and harvest, 8*d.* and cyder.

Labour is not risen here at all.

As I am now to leave the near neighbourhood of *Dorsetshire*, I shall conclude this letter with a few observations on the state of husbandry in that county, in which much the most considerable part is occupied by farmers, whose chief attention is given to sheep.

I have, in the course of the preceding minutes, endeavoured to shew that the prejudice here in favour of sheep, is hurtful to the profit of husbandry, *while they manage in the manner common at present*. It appeared, I think pretty clearly, that if sheep must totally occupy their views, they ought to change their system as much as if they converted their country to corn farms.

The proportion in which whole farms are stocked, will be nearly seen by a few instances.

		<i>Acres.</i>	<i>Sheep.</i>
Mr. Damer's farm,	-	1255	1590
Mr. Pleydell's,	-	902	1340
Lord Milton's,	-	1500	1530
Carry over,		3657	4460

THROUGH ENGLAND. 403

Brought over,	3657	4460
A farm at <i>Milton</i> abby,	1800	1700
Mr. <i>Hardy</i> ,	11000	13000
	16457	19160

Hence it appears that they flock at the rate of nearly $1\frac{1}{4}$ *per* acre. I have calculated many *Norfolk* flocks on their *corn* farms, and I find them on an average to be $\frac{1}{4}$ of a sheep *per* acre; this must surely prove how far inferior they are in this country.—The benefit of raising large quantities of wool for our manufactures, does not come into this case at all; because, supposing that an object sufficiently great to over-balance the superior products which might otherwise be gained, yet the fact of their not keeping near so many sheep as they might do on an improved system, totally answers such an objection.

But I shall not suppose any such absurd conduct, as to sacrifice *general profit* to *numbers of sheep*, but venture to recommend a total change of course, instead of that vile husbandry:

1. Wheat

3. Barley or oats

2. Barley

4. Ray-grass 3 years.

D d 2

Let

404 THE FARMER'S TOUR

Let the following be pursued.

- | | |
|------------|--------------------|
| 1. Turnips | 3. Clover, 2 years |
| 2. Barley | 4. Wheat. |

And not on a single field or so, but through the *whole farm*, except meadows: all their upland pasture, ewe leascs, &c.—the whole should be thrown with the arable into this course: 1000 acres of land would then produce,

200 Acres of turnips.

400 ——— clover.

200 ——— wheat.

200 ——— barley.

The turnips perfectly cleaned by two sufficient hand-hoeings. In this system there would be near as many sheep as at present—I am even of opinion there would be more; at present there would be 1250; nor can I doubt but more than that number might be kept on 400 acres of clover, and 200 of good turnips; but such an idea is not important; the grand question is the total product, which is evident, from a glance of the eye, would, in this course, be beyond comparison superior to that of the other: even in sheep alone, 1000 would pay more than 1250 at present, from the
plenty

plenty of winter food, and the expence of winter joist being saved.

That the earth would yield more abundant products when she was cropped with corn but twice in five years, and never with two successively, than when 3 come together every 6, cannot be doubted; were this alone the whole comparison: but what a superiority results from the introduction of a turnip crop well tilled, manured, twice harrowed, and then fed on the land!—I can hardly suppose that any man will refuse his assent to such a proposition.

Another point in the management of sheep in *Dorsetshire* which calls for particular notice, is their not folding the ewe flocks in winter. Their plea is very positive, that the thing is impossible—that they would not bear it—that the lambs would be killed—and a hundred other rhodomontade reasons, which might be decisive if it was nowhere practised. I will not instance the sheep of *Norfolk*, *Suffolk*, and other distant counties; but what say the *Dorsetshire* gentlemen to their neighbours in *Wiltshire*? The *Wiltshire* sheep are larger, and as valuable as the *Dorsets*. The ewe

406 THE FARMER'S TOUR

flocks there, are folded all winter, and in very many the ewes lamb in the fold; if the breed is so much hardier as to bear this, while the *Dorsetshire* ewes will not; it is decisive in favour of the former: but this I do not take to be the case; it is the custom in one county; it is not the custom in the other; and the practice of their fore-fathers, not the reason of the thing, is the guide in nine tenths of these matters. I cannot however avoid calling on the farming part of the gentlemen to change their conduct, and insist on their flocks being folded through the winter without intermission. Some of the farmers in *Wiltshire* have a practice which deserves imitation, where there is plenty of litter; which is to fold in a standing pen, in or near the farm-yard and haystacks; and there fold them in the wettest weather, keeping the pen well littered, and giving them hay in the racks. By this means the sheep are kept warmer, and a great quantity of valuable manure is raised.

The farmers of this county letting their dairies at 3, 4, or 5*l.* a cow, and giving into the bargain all the swine, and the keeping a mare and colt, however inadequate

quate a price, is not a matter of consequence in a public light, further than its occasioning a most incomplete conduct relative to swine; which is every where a great evil. I do not think any animal is so important in husbandry as the hog; and when the profit of them is coupled with the cows, and let at so much a head, it is no longer the interest of the farmer that many should be kept. For the perfect management of the swine, and keeping large flocks, the whole farm should be united in one hand: Of what great consequence to swine, are turnips in winter; but above all, carrots, potatoes, &c. and clover in summer; yet by letting the cows this is excluded.—It is also, in some measure, owing to the same cause their having no hog cisterns in this county, in which all the wash of the house, the dairy whey, and butter-milk—a copper full, now and then, of boiled turnips—with a few bushels of bran, or barley, or pease-meal, are kept collecting through the summer, ready for the swine in winter when there is no clover; and in summer only given to sows and young pigs. These

cisterns which are so common in *Suffolk* and *Essex*, are quite unknown in *Dorsetshire*.

Concerning the causes of these and other points of ill management, of which, however, that of sheep is the most striking; I have chiefly to observe, that the whole appears to be more owing to low rents than to any other cause. Landlords are content with 4, 7, 8, or 9*s.* an acre for land, which in many other parts of *England*, would let very readily for twice, thrice, and even four times the rent. This is the reason that the tenants are so well contented with sheep, which pay these low rents and a few shillings *per* acre profit to themselves, but would, as they manage, be utterly incapable of answering the real value of the land. No soil can be let at its value, if it is not applied by the tenant to the most profitable use. A man has 30,000 acres in *America*, which he lets at 30 half crowns a year; he gets no more rent because the tenant applies them to no profitable use: It is the same in *England*; if a tract of land is applied to no good use—no rent of value will arise from it: this is the

case with our wastes; some are converted into warrens, which enables the warrener to pay 2*s.* 6*d.* an acre; others into sheep-walks, which will enable the renter to pay 5*s.*: this is the only point of consequence; whatever the *present state* of the land will afford, is the rent—nor will the occupier think a moment of improvements, as long as his rents are so easily paid without them. In this train it is very plain that the landlord's rent must depend on the husbandry.

The gentlemen of this country are, therefore, very well off, that their estates are not applied to feeding rabbits; if they were, the rents would have been only 2*s.* 6*d.* or perhaps 1*s.*—for as to the goodness of the soil, it has nothing at all to do in the case.

If the gentlemen of the county would have their estates advanced, let them raise the rents to their real value, which is considerably above the present rate: in a word, let them raise till the farmers find that a better system must either be pursued, or rent not paid at all. They will then begin to think, that something deserves attention besides sheep—that flocks cannot be kept to profit without turnips—that tur-
nips

410 THE FARMER'S TOUR

nips must be hoed—that there are other courses of crops in the world besides three successive ones of corn—that there are other grasses besides ray—that ewes may be folded in winter—in a word, they will find out an hundred methods of paying the new rent, at the same time that they add greatly to their own wealth. If these improvements were practised, the farmers would make more profit by 15*s.* than they now do by 5*s.*

If this language had been held to the warreners and shepherds of *Norfolk* 50 years ago, they would have held it in the same contempt as the present farmers of *Dorsetshire* will consider these papers: they would have smiled at being told of another race arising who should pay ten times their rent, and at the same time make fortunes by so doing.

It is industry, spirit, and a vigorous cultivation, that carry the products of the soil to the highest pitch. The *Dorsetshire* gentlemen have long enough experienced what the contraries will do; let them enforce these exertions, and render them necessary by raising their rents so high,

THROUGH ENGLAND. 411

that farmers, who sleep through an inactive life, cannot pay them : such a conduct will create that spirit which is wanting, and convince the world that true industry, judiciously exerted, will be its own reward. But let them practise what they recommend, and not in the true drowsy stile of their lowest tenants, creep on in the humble path chalked out by the slovens of yore. It is shameful ever to see the same mediocrity the characteristic of both landlord and tenant.

LETTER XXIX.

FROM *Chard* towards *Taunton*, the country is in general thickly inclosed, and the land pretty rich. Turning to the north here was not the route I intended; but I found the season too far advanced for travelling through *Devonshire* and *Cornwall*, which counties, together with a few other western ones, I must leave for the business of another journey.

For the following account of the present state of husbandry about *Henlade*, I am obliged to *R. P. Anderdon*, Esq. of that place.

Farms rise from 20*l.* to 200*l.* a year. The soil, clay, sand, loam, gravel, stone-rush: rents are various; throughout *Taunton Dean-vale* the average is 20*s.* an acre: from hence to *Bridgwater* as much; to *Milverton*, 17*s.* 6*d.*; to *Crewkborn*, the inclosed lands 15*s.*

The

The courses of crops,

1. Clover, trefoile, 2. Wheat
ray-grass, &c. 1 3. Barley.
or 2 years

Also,

1. Clover 3. Wheat
2. Wheat 4. Barley.

And sometimes a third crop of wheat, instead of the last of barley: this is a very capital course truly!

Another:

1. Clover or vetches
2. Wheat 4. Wheat
3. Barley, or pease, 5. Barley.

They plough their fallows for wheat three or four times, sow two and a half bushels, and reap on an average 20 bushels. It is in their wheat season, that the *Taunton-vale* farmers have something of care to boast: they are extremely attentive in laying the land up neat and round, and in breaking all the clods with clodding beetles; and they draw up the beds (which are generally five or six feet over) into an arched form with hoes: but what is extremely strange, they never water-furrow their wheat lands, even on the wettest soils,

414 THE FARMER'S TOUR

soils, which must have most pernicious effects.

For barley they plough twice or thrice, sow from 14 pecks to four bushels *per* acre; mean produce 25 bushels.

They sow scarce any oats.

They sow three or four bushels an acre of pease, and get 20 in return: they plough but once for either pease or beans; they *set* many of the latter, at the expence of 1*s.* a bushel, and use four or five *per* acre; and what is as great a mark of villainous husbandry as can any where be met with, they are at this charge to set them *promiscuously*; and as to weeding or hoeing, they use neither, only turn in their sheep to have a meal on the weeds: the crop 20 bushels.

Their clover they mow once for hay, and get one or one and a half ton an acre, and then feed it: they reckon the whole summer of a good crop, however applied, to be worth from 40*s.* to 3*l.*: they never save the first growth for seed, thinking it would be too rank to yield much.

They sow winter tares in *October*, eat them in spring, and then save them for feed;

seed; the whole crop worth 30s. an acre; instead of which a good crop in soiling horses would pay 4*l.* or 5*l.*

Turnips are often sown after pease the beginning of *July* on one earth, and after wheat the latter end of *August*. In general of late years, these crops have been had not worth 10s. an acre, often not 1s. but on sandy land, and well dunged, some crops have turned out worth 20s. an acre.

On what they call improperly a summer fallow, which is on ground ploughed in the spring, and stirred sometimes once, and commonly twice afterwards, and dressed with dung, or lime and earth, they sow turnip seed broad-cast, and have on an average a crop worth 20s. *per* acre, seldom more; for they never hoe or weed, except the ketlock is very plenty in it.

In respect of manuring, they mix the head lands, or, as they call them, the *Forelands*, of the field with dung; some with dung and lime, and spread them on the lands. If dung only, about 12 cart loads to an acre. If dung and lime, 7 loads of the former, and 10 hogsheds, or about a chaldron of the latter. Some dress

416 THE FARMER'S TOUR

dress with soap ashes, earth, and dung, mostly on pasture or meadow, and sometimes on arable; 10 or 12 hogheads of the ashes *per* acre, and 6 loads of dung. These manurings on the arable last three crops, and on grass land 5 or 6 years.

Good grass land lets from 20*s.* to 40*s.* an acre; and much near *Taunton* at higher rates. As *Somersetshire* is one of the counties, in which corn is generally dearer than in most others of the kingdom, I enquired particularly, whether it was common to plough up good grass land to turn it into arable, on account of high prices of corn; I was answered, that no such thing was known or heard of; but on the contrary, much arable land was in some places laid down to grass.

An acre of good grass they reckon will fatten a beast of 36 score; but feeding a cow requires 1 $\frac{1}{4}$. Their breed of cattle the long horned; a good one will give 6 *lb.* of butter a week, from 6 gallons of milk a day. The annual product 7*l.* If let, the price is 5*l.* or 5*l.* 5*s.* A dairy maid can take care of 10 cows. The winter food is hay and straw; to 12 cows 12 acres
of

of straw are necessary, and 20 tons of hay. They winter keep them in the fields.

There are many beasts fattened; heifers and home-bred oxen, which they buy in at *Candlemas*, put them directly to hay, and then to grass; buy at from 3*l.* to 5*l.* sell at harvest at 8*l.* They reckon each beast should pay 2*s.* a week at grass.

Swine fatten from 18 to 25 score.

In general, the flocks of sheep are small, from 20 to 100. Very few farmers fold them; the breed chiefly *Dorsets*: the profit on keeping all sorts on an average 7*s.* to 10*s.* a head. In wintering ewes it runs to 12*s.* or 13*s.* Some keep the *Devonshire* breed without horns, which are reckoned to eat more, but not make a proportionable return. The winter food, besides grass, is turnips and hay.

In their tillage they reckon six oxen and two horses necessary to 50 acres: some will do with four oxen and two horses. They use four oxen and one horse in a plough; but in the first earth six oxen. The yearly expence of a horse 7*l.* or 8*l.* They do not break up their stubbles for a fallow till after spring. In clay they

418 THE FARMER'S TOUR

fur three or four inches deep; in light land five. First ploughing clay 5s. in light land 4s.; afterwards and harrowing 4s. in either.

Respecting the comparison between horses and oxen, it turns here upon the improvement in the value of the ox, and the decline in that of the horse: the latter is kept as cheap as the former; for they give no oats: but they reckon that every ox improves 50s. a year in his growth, all the while they work him: so that this is sufficiently decisive.

They know nothing of cutting straw into chaff; but very wisely throw away all their corn yields.

In hiring and stocking farms, they reckon that three rents will stock.

Land sells at 24 years purchase. Poor rates 10d. in the pound, and all paid by landlords; 20 years ago 5d. and 80 years ago nothing. The custom of landlords being at this expence, is attended with very mischievous consequences; for tenants dispensing it, they give very little attention to the amount, or to the propriety of the expenditure. At Taunton 3s. 6d. The employment

THROUGH ENGLAND. 419

employment of the women, &c. spinning, and strange to tell, no drinking of tea!

Leases from 7 to 21 years. The farmers carry their corn from three to eight miles; land-tax 1 s. 8 d. at *Taunton* 2 s.

There are many orchards throughout this country. In planting a new one, it is 10 or 12 years on a clay soil before it becomes profitable, but sooner on sand, and on clay will last good an hundred years. They never bear every year, only every second, and then yield on an average 10 hogsheads *per* acre, and the price from 20 s. to 25 s. a hoghead. Some people have sold from 3 l. 3 s. to 5 l. 5 s. a hoghead. The total of expence is 5 s. a hoghead. The sorts in most esteem are,

The white fowers.

Cackagee.

Royal wildings.

Red streak.

Golden pippin.

Twenty-four bushels of apples make a hoghead of cyder.

LABOUR.

One shilling a day all the year, with 3, 4, or 5 pints of beer or cyder.

420 THE FARMER'S TOUR

The same at hay-time and harvest, meat,
and too much drink.

Reaping wheat, 4s. 6d. per acre and binding, or 6d. more and set up, without drink.

Beans pulled by the stitch, or 10 sheaves,
at 1 s. 6 d. per score stiches, without drink.

Mowing barley, 1 s. 4d. or 1 s. 6d. without liquor.

— Oats, 1 s. without liquor.

— Grafs, 1 s. 6d. without liquor.

Hedging and ditching, single fences, from 2*d.* to 8*d.* a perch of 20 feet; double fences from 4*d.* to 1*s.* ditto.

Thrashing wheat, 2s. a quarter.

— Barley, from 1*s.* to 1*s.* 2*d.* or 3*s.*
per score bushels.

— Oats, 2s. ditto.

— Beans, 8*d.* a quarter.

IMPLEMENTS, &c.

A waggon, 14*l.* to 18*l.*

A cart, 8l. to 9l.

A plough, 25s.

A harrow, 20s.; drags, 35s.

An oaken roller, from 20s. to 40s.

I A scythe,

THROUGH ENGLAND. 421

A scythe, from 2*s.* 6*d.* to 5*s.*
 A spade, 3*s.* or home-made, 4*s.* 8*d.*
 Shoeing, 1*s.* 8*d.*
 A shovel, 3*s.* 6*d.*
 Hook, 1*s.* 6*d.*
 Hatchet, 1*s.* 6*d.*
 Reap hook, 2*s.* 6*d.*
 Mattock, 1*s.* 6*d.*
 Weeding iron, 4*d.*
 Beetle and wedges, 10*s.*
 Gloves, wear a year, 1*s.* 6*d.*
 Pit-axe, 2*s.* 8*d.*
 Rooting mattock, 1*s.* 6*d.*

PROVISIONS.

Wheat bread,	4 $\frac{1}{2}$ lb. for 6 <i>d.</i>
Cheese,	2 <i>d.</i> $\frac{1}{2}$ to 4 <i>d.</i> per lb.
Butter,	6
Beef,	3
Mutton,	3
Veal,	2
Pork,	2 $\frac{1}{2}$, 3 <i>d.</i>
Potatoes,	6 <i>d.</i> a peck.
Candles,	7 per lb.
Soap,	7

E e 3

Labourer's

422 THE FARMER'S TOUR

Labourer's house-rent, 1*l.* 10*s.*

— firing, 20*s.*

— tools, 10*s.*

BUILDING.

Bricks, 18*s.* per thousand.

Plain tiles, 24*s.*

Pantiles, 45*s.* and 50*s.*

Oak timber, from 2*l.* to 3*l.* per ton.

Elm, from 20*s.* to 25*s.*

Mason, per day, 20*d.* and beer.

Carpenter, per day, 18*d.* and beer.

Thatcher, 8*s.* per 100 laying reeds.

The particulars of a farm.

138 Acres	2 Horses
42 Arable	6 Oxen
96 Grass	6 Cows
138 <i>l.</i> Rent	18 Young
12 Wheat	12 Fat
10 Barley	8 Swine
10 Clover	80 Sheep
5 Beans	1 Man
1 Pease	1 Boy
4 Fallow	1 Maid
3 Orchard	1 Labourer.

THROUGH ENGLAND. 423

Mr. *Anderdon* of *Henlade* has formed a variety of experiments, and kept very accurate minutes of them: he was so obliging as to favour me with the following particulars.

LUCERNE.

Experiment, No. 1.

After various small experiments, the success of which was favourable, Mr. *Anderdon* tried the following.

Culture, expences, and produce of two acres.

1767.

Culture.

The soil a rich, reddish, brown, sandy loam; a good brick earth; fallowed in 1766; receiving seven ploughings, which brought it very fine and clean from weeds; but this was only apparent, for the result shewed that a drilled crop or two of turnips would have cleaned it better. May 2d, 1767, drilled it with *Willey's* plough, drawn by 2 men instead of horses, on account of the fineness of the soil; the rows equally distant, 2 feet 6 inches: 4 lb. 5 oz. of seed. The plants came up sufficiently

E e 4

thick;

424 THE FARMER'S TOUR

thick; but many were rooted up in weeding, and the vacancies supplied by transplanting. In *June* hand-weeded, *July* 28th, and *August* 1st, horse-hoed with a shim: repeated it the same month: and in *September* hand-hoed and weeded again. *November* 21, a bout with a small swing plough in the intervals, turning a furrow *from* the plants, and throwing up a ridge in the center of the intervals; except a few rows to see the difference, which, the next spring, was very great; where it was not done so, many weeds.

It was cut twice; the first produced 12 *C. wt.* of green lucerne. The second, 4 $\frac{1}{2}$ *C. wt.*: given to horses, &c.; and the value calculated at 1 s. a *C. wt.*

Expences.

1766, 1767. Four ploughings,			
at 4s.	-	£. 1	12 0
Three ditto, at 3s.	-	0	18 0
Seed, at 8d.	-	0	2 10 $\frac{1}{2}$
Carriage,	-	0	0 4 $\frac{1}{2}$
Picking and burning			
couch,	-	1	10 0
Compost, headland mixed with lime, and			
Carry over,	-	4	3 3

THROUGH ENGLAND. 425

Brought over, -	£.4	3	3
carriage, and soap-			
ashes, and wood ditto, 2	11	0	
Weeding and horse-hoe-			
ing, -	2	17	3½
Cutting and carrying, at			
2d. a C. wt. -	0	2	8½
Two years rent, -	4	0	0
Tythe, - -	0	6	0
	14	0	3

<i>Product.</i>			
16 C. wt. ¼, at 1s. -	0	16	3
Loss, - -	13	4	0
Or per acre, -	6	12	0

Experiment, No. 2.

1768.

The vacancies of the rows were filled up with lucerne plants, and here and there a few of burnet. It was kept clean by three horse-hoeings and several hand-hoeings. Cut thrice. The first was 3 ton 2 C. wt. 2 quarters; from the 20th *May*, to 23d of *June*. The second from 6th *July* to 8th of *August*; 3 tons 19 C. wt. 27 lb. The third finished about a week before *Michael-*
mas;

426 THE FARMER'S TOUR

mas; 3 tons 2 C. wt. 2 quarters: chiefly given to horses, and working oxen; they did very well upon it, and were worked hard. The aftergrass eaten by sheep till the end of November. June 6th, in the night, two cart horses eat 1 C. wt. Four plough oxen having 4 C. wt. given, they eat 3 C. wt. 1 quarter, besides what natural grass they eat in the field—but they left the largest stalks of the lucerne, which is never the case with horses.

Expences.

February 27, &c. Two men hand-hoed the rows in $2\frac{1}{2}$ days with Dutch hoes,	-	£.0	5	10
March 2. Filling vacancies,		1	11	1
Three horse-hoeings; a man, boy, and horse, one day each,		0	9	0
Weeding twice,	-	2	4	$10\frac{1}{2}$
Cutting and carrying, at 2 d. C. wt.		1	14	0
Rent and tythe,	-	2	3	0
			8	7 9 $\frac{1}{2}$

Product.

	Tons.	C. wt.	Quar.	lb.
First,	3	2	2	0
Second,	3	19	0	27
Third,	3	2	2	0
	10	4	0	27 at 20 s.
Carry over,				10 4 3

THROUGH ENGLAND. 427

Brought over,	-	£. 10	4	3
Aftergrafs,	-	0	10	0
Expences,	-	10	14	3
		8	7	9½
Profit,	-	2	6	5½
Or per acre,	-	1	3	2½

Experiment, No. 3.

1769.

Mr. Anderdon's memorandum.

"This spring the lucerne was very serviceable; for the season being backward, I should have been obliged to have kept my plough horses and oxen on hay till June, and to have spring eaten my meadows, with other stock, much later than I did, or have sold them to great disadvantage."

The latter end of this year some more vacancies were supplied with fresh plants. Twice horse-hoed—once harrowed; and the rows hand-hoed thrice. It was cut three times. The first from the 17th of May, to the 1st July; 6 ton 1 C. wt. 3 quarters, 14 lb. The second from the 13th July to 12th August; 4 ton 19 C. wt. 24 lb. Third, 3 from

428 THE FARMER'S TOUR

from 16th *August* to 23d *September*; 2 ton
17 C. wt. 3 quarters, 25 lb. The after-
grafs kept 73 ewes and rams 6 days; and
36 hog sheep 4 days.

Expences.

Two horse-hoeings,	-	£. 0	6	0
Harrowing,	-	0	2	8
Hand-hoeing,	-	0	11	9½
Filling vacancies,	-	0	6	0
Cutting and carrying, at 2d.	-	2	6	6
Rent, &c.	-	2	3	0
		5	15	11½

Produce.

	Tons.	C. wt.	Quar.	lb.
First,	6	1	3	14
Second,	4	19	0	24
Third,	2	17	3	25
	13	19	0	7 at 20s.
Aftergrafs,	-	-	-	13 19 0
				0 15 0
				14 14 0
Expences,	-	-	-	5 15 11
Profit,	-	-	-	8 18 0
Or per acre,	-	-	-	4 9 0

THROUGH ENGLAND. 429

Experiment, No. 4.

1770.

December 22d, 1769, crop several shoots of lucerne 4 inches long; shot forth since the autumnal eating. The 29th and 30th ditto, 6 and 7 inches long; and measured one left, 10 inches.

Horse-hoed four times, and hand-hoed four times. The compost, mentioned before, carried on to the land and spread; it was made the first year, but not used then. *Lady-day* and *April* the plants appeared much damaged by the frosts and cutting winds; which is attributed to its being so forward and full of sap.

The first cutting, *May* 22d, to *July* 21st, per acre, 4 ton 1 C. wt. 2 quarters 18 lb. The second from *July* 21st, to 25th of *August*; 2 ton 16 C. wt. 1 quarter 20 lb. N. B. This would have been more considerable, had there not been a delay in the first, which was injurious both to that and this; the leaves dropping off, at last, on the first cutting. The third from the 25th *August*, when the plants were 20 inches high, to 10th of *October*; 2 ton 2 quarters 24 lb.

430 THE FARMER'S TOUR

Expences.

Driving and spreading the com-				
post,	-	-	-	£. 0 12 0
Four horse-hoeings,	-	-	-	0 12 0
Four hand ditto,	-	-	-	0 16 8
Cutting and carrying,	-	-	-	2 19 7
Rent, &c.	-	-	-	2 3 0
				7 3 3

Produce.

	Tons.	C.	wt.	Quart.	lb.	
First per						
acre,	4	1	2	18		
Second,	2	16	1	20		
Third,	2	0	2	24		
	8	18	3	6		
					2	
	17	17	2	12		17 17 6
Aftergrafs,	-	-	-	-		0 5 0
						18 2 6
Expences,	-	-	-	-		7 3 3
Profit,	-	-	-	-		10 19 3
Or per acre,	-	-	-	-		5 9 7½

Recapitulation per acre.									
	T. C.	Q. lb.	l. s. d.		l. s. d.		l. s. d.		
1767. Produce	0 8	0 14	Expences	7 0 1	Loss	6 12 0	Profit,	0 0 0	
1768.	5 2	0 13		4 3 10			1 3 2 $\frac{1}{2}$		
1769.	6 19	2 3		2 17 11			4 9 0		
1770.	8 18	3 6		3 11 7			5 9 7 $\frac{1}{2}$		
							11 1 10 $\frac{1}{2}$		
							Loss,	6 12 0	
Totals,	21 8 2 8			17 13 5			4 9 10		
Averages,	5 7 0 16			3 10 8*			* 0 17 11		

* These the averages of 5 years—the fallow included.

432 THE FARMER'S TOUR

Observations.

No common husbandry in this country will near equal this very considerable profit. The loss of the first year is, with lucerne, ever to be expected; the preparations should be perfect, and consequently expensive; and the produce is never any thing of moment; but in succeeding ones the case changes greatly; the profit rises from 1*l.* 3*s.* 2*d.* to 5*l.* 9*s.* clear, *per* acre; and from the appearance of this plantation, I have little doubt of its lasting these 20 years. Mr. *Anderdon* has done it justice in keeping it clean, and the profit of the crops has repaid him amply. What husbandry more desirable than a crop which will yield a clear profit of 550*l.* a year from 100 acres of land! And this not by a product of difficult or confined sale, but that may be multiplied to any extent without a diminution of price.

The success of this trial shews that rows equally distant, 2 feet 6 inches asunder, are very proper for drilling lucerne. The application of the crops prove that not only cart horses, but also ploughing oxen hard worked, may be subsisted to great
advan-

advantage on lucerne alone: and also that in late springs, this plant is of uncommon use in preventing the meadows being eaten, and in saving hay.

This circumstance is one of the grand objects of modern husbandry: a spring shoot, every one must be sensible, is more likely to answer the purpose than any vegetable that arrives at perfection in autumn; because it must be in a decline in *March* and *April*, however useful it may then prove.

SAINFOINE.

Experiment, No. 5.

The first trial of this grass was made in a field of $4\frac{1}{2}$ acres; a stoney soil on limestone; reckoned about 5 s. an acre value.

For the drilling, the seed box of Mr. *Wiley's* plough was first filled with two quarters of seed, and one added afterwards every bout, sowing two rows; and it is observable, that the seed box drops more with only a quartern of seed in it, than if it is fuller.

434 THE FARMER'S TOUR

The holes intended for pease or wheat were used on this occasion.

The seed cost 4*s.* 7*d.* a bushel. The barley sown with it, as under, turned out a good crop; for which the sainfoine was the worse.

All the grafs, except what was sown with the barley, was hand-weeded the first summer (1767) at great expence; which, says Mr. *Anderdon*, was another instance of my being here, also, too hasty in laying down to grafs, before I had two or three ameliorating crops to improve the land and kill the weeds.

April 14, 15. Sowed as follows.

	<i>Acres.</i>		<i>Seed.</i>	
	<i>B.</i>	<i>P.</i>		
No. 1. Broad-cast with barley, - -	1 $\frac{1}{2}$	9	0	
2. Drilled alone on ridges, 30 double rows, 1 foot asunder; intervals 2 feet 6 inches, - -	1	10	0	$\frac{1}{2}$
3. Drilled (with broad-cast barley) on 16 ridges; double rows, 1 foot asunder; intervals the same as No. 2.	$\frac{1}{2}$	0	2	$\frac{1}{2}$
Carry over, -	3 $\frac{1}{2}$	10	2	$\frac{1}{2}$

THROUGH ENGLAND. 435

Brought over,	-	3 $\frac{1}{4}$	10	2 $\frac{1}{2}$
No. 4. Drilled in equally distant rows, 8 $\frac{1}{2}$ inches asunder, without barley,		$\frac{3}{4}$	1	2 $\frac{1}{2}$
5. Sown broad-cast without barley,	-	-	$\frac{3}{4}$	2 2
			4 $\frac{3}{4}$	14 3

Products.

No.	Acres.	1768. Tons. C. wt.	1769. Tons.	1770. Tons.
1.	1 $\frac{3}{4}$	17	2 $\frac{1}{4}$	2 $\frac{1}{3}$
2.	1	1	1 $\frac{3}{4}$	1 $\frac{2}{3}$
3.	0	0	0	0
4.	$\frac{3}{4}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$
5.	$\frac{3}{4}$	1	1 $\frac{3}{4}$	1
6.*	4 $\frac{1}{4}$	4 2	6	6 $\frac{1}{2}$
		1 5	1	1 $\frac{1}{2}$
	5	5 7	7	8

No.	1768. Per acre. C. wt.	1769. Per acre C. wt.	1770. Per acre. C. wt.
1.	9	25	26
2.	20	35	32
4.	26	33	40
5.	33	20	26
6.	33	26	40
	121	139	164
	139		
	164		
	3) 424		
	5) 141		
	28, or 1 ton 8 C. wt. per acre per ann.		

* This is in another field, some of it broad-cast; some drilled 2 $\frac{1}{2}$ feet, and some 10 inches: the drilled best.

436 THE FARMER'S TOUR

No. 3, where the sainfoine failed, was ploughed up before the winter, 1768, and lay fallow till the spring, 1769; when barley was drilled in rows, 9 inches asunder, and a single row of sainfoine between every two rows of corn: so that the grass was 18 inches asunder. *October* 4th, 1768, the forwardest stalks of the drilled after-grass were two feet high.

Part of the broad-cast, with barley, lying wet, promised to produce very little; but spreading 10 bushels of wood-ashes upon it the 22d *March*, 1768, improved it vastly, which induced him to spread about 10 hogsheds of lime rubbish on part of the equidistant rows, in *December*, 1769; and to mix $52 \frac{1}{2}$ hogsheds of lime, and put one load of dung with a headland of earth in the summer, 1769; which was carried out and spread on some part, of each sort, of the differently sown sainfoine, in *February*, 1770, except what lay opposite the sainfoine drilled in spring, 1769, and is intended to be spread thereon.

The wide intervals were horse-hoed, 2d *December*, 1767, in 1768, and in the spring 1769; but were much out of order in the spring,

spring, 1770, (when they were again horse-hoed) for want of proper hoeing before the winter, 1769; that being, as he found from experience, as necessary a time of the year for horse-hoeing grasses, as any; and he thinks the same in respect of wheat, if executed with judgment and caution, and the crop be drilled in due season to admit of it.

May 11, 12, 13, 1767, sowed three pecks of sainfoine, broad-cast, without corn, on about $\frac{1}{4}$ of an acre; and drilled $2\frac{1}{4}$ pecks on almost 32 perches, in a field near the other, and the soil much the same, viz. 6 rows, 3 feet asunder, and 20 rows, 10 inches asunder; also sowed a small patch of land in the last field, broad-cast—these parcels making $\frac{1}{4}$ of an acre, are called No. 6. in the preceding table.

The 24th July, 1767, the three feet intervals were horse-hoed.

The equi-distant rows in this field were best at hay-making, 1768, but the after-grass of those horse-hoed, turned out best before *Michaelmas*. All the sainfoine in this field thrives, except one part that is damp; the other parts seeming well adapted

438 THE FARMER'S TOUR

to it; and as the quantities of seed here sown, seem proper ones, Mr. *Anderdon* concludes, in future, to sow 3 bushels on an acre, broad-cast, well cleaned of weeds. Nor does the same quantity by this experiment, at present, appear to be too much for an acre in equi-distant rows, 10 inches asunder.

These experiments were all (except the broad-cast with corn) hand-hoed and weeded the first and second years; and Mr. *Anderdon* recommends both horse and hand-hoeing every year, sufficient to keep it clean.

The broad-cast, without corn, cost, in cleaning, about half as much as the drilled the first year.

The three feet intervals, and some of the equi-distant rows (parts of No. 6.) were horse-hoed before *Christmas*, 1769, and shewed the great advantage of it in their gay and lively appearance early in the spring, 1770.

Observations.

Drilling sainfoine makes, I think, a better figure here, than I any where remember to have read. The best of all the methods followed, is drilling in equally distant rows,
at

THROUGH ENGLAND. 439

at eight inches and a half asunder: the broad-cast (with and without barley equal, which is observable) the worst of all: Double rows at one foot, with two feet six inch intervals, yielding so much more than the broad-cast, is very remarkable. The profit of this grass on these soils is in general decisively proved. And it is evident from them, that no application of such poor land at 5s. which is by no means favourable for any corn crop, can be equal to this of sainfoine. Pity that such poor hills are not universally occupied by it. There are many such tracts on the hills of *Somersetshire*.

BURNET.

Experiment, No. 6.

May 16, 1766, sowed a piece of old orchard ground with *Rocque's* burnet in drills and broad-cast: it was broken up the year before, and yielded turnips, but had no manure. *August* 29, cut and gave it to oxen and cows, together with white

F f 4 beet;

440 THE FARMER'S TOUR

beet ; some were fonder of one, some of the other. *October* 14, cut it again, being in a fine flourishing state, better than some lucerne cut the same day in *August*, and now again.

The cows would eat the burnet well enough ; but a mare very greedily, and was fonder of *Rocque's* burnet than of a plant or two from an old natural pasture transplanted, which has a stronger aromatic smell than the former, though that was very strong ; but the mare was fonder next day of lucerne than of burnet. Middle of *December* cut it again.

1767, *February* 14, cut it 3 inches high.

The end of this month it was eaten off by pigs. *March* 27, cut it 5 inches high. *April* 12, again the same height.

May 9, a fourth time, 7 or 8 inches high ; some shoots 12 to 14. *June* 9, a fifth time, 12 inches high : some 18 or 20. *July* 6, cut it the sixth time, eight or nine inches high ; some 18 or 20. *August* 5, the seventh cutting, 12 inches high. *September* 16, the eighth cutting, 12 inches high.

high. *September 29*, the shoots were seven inches high.

These frequent cuttings, says Mr. *Anderdon*, shew the vast produce of this plant in good ground. *Jan. 26*, 1767, observed burnet in an open field, which was cut the middle of *December*, to be this day from three to five inches high, or upwards; and it was then good pasture for sheep; though from the middle of *December* till that time it was mostly frost and snow, which killed the cabbages, brocoli, and many other garden plants.

1768, *March 26*, cut the produce of one root, which came by chance into a bed of broad-cast lucerne.

Its green shoots,	-	-	870
		lb. oz.	
Its whole weight,	-	1	5 $\frac{1}{2}$
Old dry stalks,	•	0	1 $\frac{1}{2}$
Clean green fodder,		1	4

April 24, burnet cut the 30th of *January*, was now 15 or 16 inches long, and much more flourishing than what was not cut then, which shews that this grass should be eaten early in the spring.

442 THE FARMER'S TOUR

Observations.

The growth of all the cuttings in 1767, is six feet three inches long, which is very considerable, but not equal to lucerne.

From this gentleman's observations on the growth, however, it is plain, that burnet vegetates in the depth of a severe winter very strongly: now no plant can do this without being applicable to numerous most important uses. It is also plain, that Mr. Anderdon's cattle will eat it.

Experiment, No. 7.

May 11, 1767, drilled 54 perches of land, three rows of burnet, three feet afunder, and nine rows eight inches afunder: also 27 perches broad-cast: soil upon clay on a lime-stone rock.

A memorandum in the year 1768.

"All this burnet thrives pretty well, considering the poorness of the ground, being worth only 5s. an acre; but does not produce nearly so great a burthen as sainfoine in

THROUGH ENGLAND. 443

in the same field. All cattle eat it tolerably well green, but are not remarkably fond of it; and when seeded, don't care to eat it at all. But as soon as made into hay, horses and oxen eat it very greedily; and sheep will not refuse it in the spring, till run up for feed, which is oftentimes early in *April.*"

Since this time, through the years 1769 and 1770, the same remarks have been made: the produce has not increased: the quantity is greatest from the three-foot distance. The nine inches next, and the broad-cast the least. But the two first have both been horse-hoed, though not so frequently as they should have been.

Experiment, No. 8.

May 17, 1768, drilled in same field three roods in equally-distant rows, one foot asunder, between rows of barley: it was hand-weeded the first year, and horse-hoed once a year since. In 1769, it was fed with oxen, sheep and horses; none eat it greedily, though without waste: but the produce small.

In 1770, cut it for hay and seed once,
the

444 THE FARMER'S TOUR

the produce at the rate of 7 C. wt. of hay per acre.

Experiment, No. 9.

May 19, 1768, drilled one acre with burnet in rows equidistant, one foot asunder, with 1 lb. 9 $\frac{1}{2}$ oz. of seed; the soil a poor clay, formerly a copse, worth about 1 s. an acre. It was horse-hoed once; the crop turned out very poor.

Experiment, No. 10.

May 27 and 28, drilled two acres of poor land, like No. 9, with 2 lb. 12 $\frac{1}{2}$ oz. of seed, in equally-distant rows, one foot asunder, between rows of barley. It was horse-hoed once, mown in 1769 for hay, the produce very trifling. April 13, 1770, turned in 46 couples upon this burnet in the morn, and took them out next day at noon: they eat it.

TIMOTHY GRASS.

Experiment, No. 11.

July 3, 1766, sowed some timothy grass, broad-cast, adjoining to some plots of lucerne, burnet, bird-grass, sainfoine, and white beet: a horse being turned in to the whole eat the timothy, though rank and in seed, in preference to all the others.

Experiment, No. 12.

May 16, 1768, drilled three roods of poor wet clayey land, worth 5s. an acre, with $10\frac{1}{2}$ oz. of seed, in rows 19 inches asunder. In 1769, it was cut for hay; but the produce trifling. In 1770, sowed it for seed; the quantity very little. The after-grass has been eaten down regularly with sheep, who prefer it to burnet in the same field.

Experiment, No. 13.

In 1769, sowed three roods broad-cast with barley in a swampy part of the same field. In 1770, mowed it for hay; the produce 5 C. wt. hay: the after-grass fed with sheep.

Observations.

Mr. *Anderdon* from these trials apprehends the timothy grass to be a sweet food either green or in hay; and may answer in poor swampy lands sown broad-cast.

WHITE BEET.

Experiment, No. 14.

In July, 1766, sowed some white-beet seed in rich ground. It came up, and grew exceedingly vigorous, and ran up five or six feet; cows eat it readily. Apprehends

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that

446 THE FARMER'S TOUR

that on rich lands, it might answer; it is hardy.

DRILLED WHEAT.

Experiment, No. 15.

Culture, expences, and produce of an acre of Drilled Wheat.

1768.

Culture.

The soil a rich, faint red loam, inclining to clay, worth 20s. an acre.

Drilled the 26th and 28th of November, 1767, twelve ridges in double rows, with white wheat, and 12 ridges mostly with four rows on each, also two with five rows: these rows all one foot asunder, and the ridges five feet wide; the quantity of seed one bushel and four pints. The rest of the field, being two acres and a quarter, was sown broad-cast with four bushels, three pecks, one gallon, and five pints: it yielded, in 1767, a crop of hog-pease, the stubble of which was ploughed thrice.

March 9, 1768, horse-hoed from the double rows, and back again. In turning the furrow from the rows, the hoe-plough went two bouts. May the 11th and 13th, horse-

THROUGH ENGLAND. 447

horse-hoed the double rows again, off and on, three bouts in each interval.

At the same time hand-hoed with *Dutch* hoes the spaces between the rows.

June 10, stirred the intervals with a cultivator.

July 6, ploughed them again, throwing the earth to the rows, at two bouts in each.

The produce of the drilled was,

			B.	P.	G.	P.
Of the 12 ridges, double rows,	5	3	0	4		
Of the 12, with 4 and 5 rows,	5	3	0	0		
Total,	-	-	11	2	0	4
Seed,	-	-	1	0	0	4
Clear crop,	-		10	2	0	0
Of the broad-cast, the 2 $\frac{1}{2}$						
acres,	-	-	35	2	1	4
Seed,	-	-	4	3	1	5
Clear crop,	-		30	2	1	7
Which is <i>per</i> acre,			13	2	0	0
Ditto of the drilled,			10	2	0	0
Superiority of the broad-cast,			3	0	0	0

448 THE FARMER'S TOUR

Account of the Drilled.

Expences.

Three ploughings,	-	£. 0 12 0
Harrowing,	-	0 0 6
Drilling,	-	0 0 9
Seed, at 7s.	-	0 7 5
Horse-hoeing,	-	0 3 0
Hand-hoeing,	-	0 5 0
Reaping,	-	0 4 0
Harvesting and leafing,*	-	0 3 0
Thrashing, 3d. a bushel,	-	0 2 10
Carrying out, 2d. a bushel,	-	0 1 11
Rent,	-	£. 1 0 0
Tythe,	-	0 5 0
		1 5 0
Total,	-	3 5 5

Produce.

11 Bushels and a half, at 7s.	4 0 6
Straw,	0 8 0
Total,	4 8 6
Expences,	3 5 5
Profit,	1 3 1

* Gleaning; but not by the poor: the farmers take it themselves. This is particular: they reckon it on an average at one peck an acre.

THROUGH ENGLAND. 449

Account of the broad-cast.

Expences.

Three ploughings,	-	£. 0	12	0
Harrowing,	-	0	0	6
Sowing,	-	0	0	3
Seed, 2 bushels and a peck, at 7s.	-	0	15	9
Hand-weeding,	-	0	3	0
Reaping,	-	0	5	0
Leasing and harvesting,	-	0	4	0
Threshing,	-	0	4	0
Carrying,	-	0	2	7
Rent,	-	1	5	0
Total,	-	3	12	1

Produce.

15 Bushels 3 pecks, at 7s.	-	5	10	3
Straw,	-	0	12	0
Total,	-	6	2	3
Expences,	-	3	12	1
Profit,	-	2	10	2
Ditto of the drilled,	-	1	3	1
Superiority of the broad-cast,	-	1	7	1

Observations.

These drilled crops are by no means to be despised, especially if the circumstance of the tillage the land received while they

450 THE FARMER'S TOUR

are growing be considered; but the common method is however so much superior, that the experiment will not allow of recommending the new mode.

We must however allow, that there is reason to think some crops of drilled wheat might be advantageously used, *with a view to clean the land.*

Experiment, No. 16.

Culture, expences, and produce of one acre of drilled wheat.

1768.

Culture.

Soil a poor wet clayey land, part of it stoney, worth 5 s. an acre. Yielded oats in 1767; ploughed thrice, and drilled with wheat, double rows, at one foot, on four-foot ridges, the 1st of *December*, 1767, with one bushel and a pint of white seed, and at the same time sowed a rood adjoining, broad-cast, with three pecks five pints and a quarter; horse-hoed with plough twice from and once to, and with the cultivator once: no hand work.

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THROUGH ENGLAND. 451

The produce of the drilled eight bushels, three pecks, and one gallon; of the broad-cast, one bushel, one pint and a quarter.

Account of the drilled.

Expences.

Three ploughings,	-	£.	0	12	0	
Harrowing,	-	-	0	0	6	
Drilling,	-	-	0	0	9	
Seed, at 7s.	-	-	0	7	1½	
Horse-hoeing,	-	-	0	3	0	
Reaping,	-	-	0	4	0	
Leasing and harvesting,	-	-	0	3	0	
Thrashing,	-	-	0	2	2	
Carrying out,	-	-	0	1	5	
Rent,	-	£.	0	5	0	
Tythe,	-	-	0	4	0	
				0	9	0
Total,	-	-		2	2	11½

Produce.

8 Bushels, 3 pecks, and one				
gallon, at 7s.	-	3	2	1
Straw,	-	0	5	0
Total,	-	3	7	1
Expences,	-	2	2	11
Profit,	-	1	4	2

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452 THE FARMER'S TOUR

Account of the broad-cast.

Expences.

Ploughing and harrowing,	£.	0	12	6
Sowing, - - -	0	0	3	
Seed, 3 bushels, 1 peck, 5 pints,	1	3	10	
Reaping, - - -	0	2	6	
Leasing and harvesting, -	0	2	0	
Thrashing, - - -	0	1	1	
Carrying, - - -	0	0	8	
Rent, &c. - - -	0	9	0	
Total, - - -	2	11	10	

Produce.

4 Bushels, 5 pints,				
at 7s. - - -	1	8	6	
Straw, - - -	0	2	6	
	1	11	0	

Loss, - - - 1 0 10

Profit by the drilled, 1 4 2

Superiority of the latter, 2 5 0

Observations.

Mr. *Anderdon* on this crop remarks, that "wheat may be brought to perfection, by this method of drilling, on such poor land as will not do it in the broad-cast way." Double rows at one foot, with three-feet intervals, is a method, which here shines in a peculiar manner: the superiority to the broad-

broad-cast is great. Probably, these very indifferent soils are better adapted to this *Tullian* system than the richer soils, which is contrary to what reason alone would allow one to imagine.

Experiment, No. 17.

Culture, expences, and produce of three acres and a quarter of drilled wheat,

1769.

Culture.

The soil a stoney clay, worth 12s. an acre; yielded vetches in 1768, ploughed twice for wheat, manured with lime, dung, and earth mixed; 40 hogsheds lime, and eight loads of dung. Drilled the 10th of *December* in double rows on five-foot ridges, with two bushels and three quarters of a peck of white wheat: it was horse-hoed three times, and hand-weeded, with some hoeings as often. The product 61 bushels, three pecks and a half, which is *per acre* 19 bushels.

Expences per acre.

Manuring,	-	-	£. 1	0	4
Two ploughings,	-	-	0	8	0
Harrowing,	-	-	0	0	6
Hacking the clods,	-	-	0	1	4
Carry over,	-	-	1	10	2

454 THE FARMER'S TOUR

Brought over,	-	£. 1 10 2
Drilling,	-	0 1 0
Seed, at 7s. 4d.	-	0 5 1
Horse-hoeing,	-	0 3 0
Hand-weeding, &c.	-	0 13 2
Setting up the corn partly blown about, to admit the hoe- plough,	- - -	0 0 9
Reaping,	-	0 4 2
Leasing,	-	0 1 6
Harvesting,	-	0 3 0
Thrashing,	-	0 4 9
Carrying out,	-	0 3 2
Making 40 reed sheaves, at 10s. per 120,	-	0 3 4
Bundling 1 $\frac{1}{2}$ seam of straw,	-	0 0 1 $\frac{1}{2}$
Rent,	0 12 0	
Tythe,	0 4 0	
		0 16 0

Total, - - 4 9 2 $\frac{1}{2}$

Produce,

18 Bushels, at 5s. 4d.	-	4 16 0
One ditto, at 4s.	-	0 4 0
40 Reed sheaves, each 25 lb.	-	0 8 4
One seam and half of straw,	-	0 2 3

Total, - - 5 10 7

Expences, - - 4 9 2

Profit, - - 1 1 5

Observations.

Mr. *Anderdon* has on this experiment minuted the following remark: "Two ridges by an accident being ploughed together, three double rows were drilled on them; the middle double row could have no advantage of the horse-hoe: to shew the progression, five double rows were thrashed separately: the two outward ones having the advantage of the horse-hoe in common with the rest of the field: the two next appear by the produce to have reaped some advantage, though the earth between them and the furrows, two feet from the outward rows, was not hoed.

	Stitch.	Sb.	P.	G.	P.
The outward double row against the south produced,	2	2	2	0	7
The inner ditto,	1	9	2	0	1
The middle, -	1	6	1	0	2½
The inner double row against the north, -	1	6	1	1	3½
The outward ditto, -	2	0	1	1	5

456 THE FARMER'S TOUR

Experiment, No. 18.

Culture, expences, and produce of three acres and a quarter of drilled wheat.

1770.

Culture.

The same land as No. 17, drilled again this year. In *September* the intervals of the old rows were ploughed with double mould-board plough, deepening the furrows. The earth was then thrown back again, with one bout of the patent plough, forming a ridge in the center. Both these operations were repeated, and after them, the spaces on which the rows of stubble stood were split, which reversed the old ridges completely: harrowed it then with horse and the drill harrows, and drilled the 13th of *October* with two pecks *per* acre of the wheat it yielded last year. It was so fine as to require no hacking to prepare it for the seed. Horse-hoed it three times; the first horse-hoeing was in *December*, and many small weeds appeared; and hoed so near the rows as to damage the crop considerably; and hand-hoed and weeded as often.

THROUGH ENGLAND. 457

Expences per acre.

Ploughing and harrowing,	£.	0	7	8
Drilling, - - -	0	0	9	
Seed 2 pecks, at 5s. 4d. -	0	2	8	
Horse-hoeing, - - -	0	6	10	
Hand-hoeing, - - -	0	4	9	
Setting up the wheat covered by clods in horse-hoeing,	0	0	7	
Reaping, &c. - - -	0	8	8	
Thrashing, - - -	0	3	4 $\frac{1}{2}$	
Carrying out, - - -	0	2	3	
Making reed, - - -	0	3	7	
Bundling straw, - - -	0	0	2	
Rent and tythe, - - -	0	16	0	
Total, - - -		2	17	3 $\frac{1}{2}$

Produce.

13 Bushels of wheat, at 6s.	3	18	0
Half a bushel, inferior, -	0	2	9
43 Reed sheaves, at 1l. 5s.	0	8	11 $\frac{1}{2}$
2 Seams straw, -	0	3	0

Total, - - -	4	12	8 $\frac{1}{2}$
Expences, - - -	2	17	3 $\frac{1}{2}$

Profit, - - -	1	15	5
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N. B. Reed last year charged -	1	9	11
In fact only -	1	8	4

A mistake of -	0	1	7
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458 THE FARMER'S TOUR

Observations.

Mr. *Anderdon* is well informed, the average produce of wheat *per* acre, through this parish and the adjoining ones, was not last harvest more than 10 or 12 bushels, though some of the land on which it grew lets for 20s. an acre; which shews that this method of drilling wheat may answer well on such ground as this experiment was made on, for two successive years, if for no longer a time.

Experiment, No. 19.

Culture, expences, and produce of three acres and a quarter of drilled wheat.

1769.

Culture.

The soil a stiff clay; 10s. *per* acre. In 1768 it yielded drilled pease: it was once ploughed for the wheat; drilled it with white wheat at three times, from the 10th of *January* to the 6th of *February*, with two bushels, half a peck, and one quart of seed, in double rows on $4\frac{1}{2}$ feet ridges. *May* 10 and 11, horse-hoed for the first time, turning furrows from the rows at two bouts in each interval, and also hand-weeded. The 17th, rolled (a bout in each interval)

THROUGH ENGLAND. 459

interval) with a stone roller. *June* 13 and 14, returned the earth to the rows by one bout of *Hewit's* horse-hoe with an iron mould-board: after this the intervals received a stirring with a shim. *June* 23, 26, and 27, hand-hoed a second time. The 29th, ploughed it again with *Hewit's* hoe, a bout in each interval.

The 24th of *July*, horse-hoed again, with the *Rotterham* plough; also a bout in each interval with *Hewit's*. The produce,

22 Bushels 2 pecks of the best wheat.

6 $\frac{1}{4}$ Inferior.

4 Reed sheaves of straw.

5 Seams and 2 bundles of ditto.

Expences of the three acres and a quarter.

Ploughing,	-	-	£. 0	13	0
Drilling,	-	-	0	3	3
Seed, at 7s. 4d.	-	-	0	15	9
Horse-hoeing,	-	-	1	1	3 $\frac{1}{4}$
Weeding,	-	-	0	8	11
Reaping, leasing, harvesting, &c.	0	18	10		
Thrashing, making reed, and carrying out,	-	-	0	10	7
Rent, at 10s.	1	12	6		
Tythe,	-	0	13	0	
				2	5
Total,	-	-		6	17
					2 $\frac{1}{2}$

460 THE FARMER'S TOUR

Produce.

22 Bushels 2 pecks, at 5 s.	5	12	6
6 ——— $\frac{1}{4}$ of a peck, at 4 s. 9 d.	1	9	1
4 Reed sheaves, —	0	0	8
5 Seam 2 bundles, at 1 s. 6 d.	0	7	10 $\frac{1}{2}$
2 Pecks tail corn, —	0	0	8
Total, — —	7	10	9 $\frac{1}{2}$
Expences, — —	6	17	2 $\frac{1}{2}$
Profit, — —	0	13	7
Or <i>per</i> acre, — —	0	4	0

The clear product *per* acre one quarter and half a peck.

At the same time three fourths of an adjoining acre was sown broad-cast; but the crop too bad to be taken any particular account of: but these three roods succeeded broad-cast pease; whereas the drilled crop followed drilled pease.

This crop is but indifferent, and the expences run high: the advantage however to the soil of the hoeing should not be forgotten.

Experiment, No. 20.

Culture and expences of three acres and a quarter of drilled wheat.

1770.

Culture.

The same land as No. 19.; drilled again with six pecks of wheat, the blue-ball sort,

I

with

THROUGH ENGLAND. 461

with awns, the 18th, 21st, and 26th of *September*. Four cart loads of dung were put into the middle furrows of about one acre of the worst part of the field, before the last ploughing: and here the wheat flourished best all winter. It was horse-hoed thrice, in one of which the rows were much damaged by going too near with the plough. It was also hand-weeded twice.

Expences.

Ploughing,	-	-	£. 0	13	0
Drilling,	-	-	0	3	3
Seed, at 5s. 4d.	-	-	0	8	0
Manure,	-	-	0	10	0
Horse-hoeing,	-	-	0	13	9
Hand-weeding,	-	-	0	7	6
Reaping, harvesting, &c.	-	-	0	18	10

DRILLED BARLEY.

Experiment, No. 21.

Culture, expences, and produce of one third of an acre of drilled barley.

1767.

Culture.

The soil a poor clayey, stoney land, cropped with wheat in 1766, ploughed twice. The 11th, 12th, and 13th of *May*, drilled

462 THE FARMER'S TOUR

drilled 4 rows, at 2 feet asunder, and 8 rows at ten inches, with one peck, one gallon, and five pints, which is almost $5\frac{1}{2}$ pecks *per* acre. At the same time sowed the same quantity of land, broad-cast, with one bushel, one gallon, and four pints. The drilled barley came on much the strongest.

Produce.

	B.	P.	G.	P.
Of the broad-cast,	8	2	0	4
Seed,	1	0	1	4
Clear crop,	7	1	1	0
Of the drilled, four rows,	2	1	0	6
Eight ditto,	4	2	1	5
Total,	7	0	0	3
Seed,	0	1	1	5
Clear crop,	6	2	0	6

Proportions per acre.

	B.	P.	G.	P.
Broad-cast crop,	25	2	1	4
Seed,	3	2	0	4
Clear crop,	22	0	1	0

THROUGH ENGLAND. 463

	B.	P.	G.	P.
Drilled crop,	21	0	1	4
Seed,	1	0	1	0
Clear crop,	20	0	0	1
Broad-cast,	22	0	1	0
Drilled,	20	0	0	1
Superiority of the former,	2	0	0	7

Account of the drilled.

Expences per acre.

Two ploughings,	£. 0	8	0
Harrowing,	0	0	6
Drilling,	0	1	0
Seed, at 3s. 6d.	0	4	10
One horse-hoeing,	0	1	0
Hand-weeding,	0	3	0
Reaping,	0	2	6
Harvesting,	0	2	6
Thrashing,	0	2	7
Carrying out,	0	3	6
Rent,	0	5	0
Tythe,	0	2	6
Total,	1	16	11

464 THE FARMER'S TOUR

Produce.

21 Bushels, one gallon, one			
pint, at 3s. 6d.	-	-	3 13 11
Straw,	-	-	0 5 0
Total,	-	-	3 18 11
Expences,	-	-	1 16 11
Profit,	-	-	2 2 0

Account of the broad-cast.

Expences per acre.

Ploughing,	-	-	0 8 0
Harrowing,	-	-	0 0 6
Sowing,	-	-	0 0 3
Seed, 3½ bushels, at 3s. 6d.	-	-	0 12 3
Weeding,	-	-	0 8 0
Mowing and harvesting,	-	-	0 3 9
Thrashing,	-	-	0 3 3
Carrying out,	-	-	0 4 3
Rent and tythe,	-	-	0 7 6
Total,	-	-	2 7 9

Produce.

25 Bushels, 2 pecks, 1 gallon and			
4 pints, at 3s. 6d.	-	-	4 9 11½
Straw,	-	-	0 2 6
Total	-	-	4 12 5½
Expences,	-	-	2 7 9
Profit,	-	-	2 4 8½

THROUGH ENGLAND. 465

Profit of the broad-cast, £. 2 4 8½

Ditto of the drilled, 2 2 0

Superiority, 0 2 8½

Mr. *Anderdon* on this experiment has the following remark : “ The drilled barley was twiripe; yet I believe the drilled would have exceeded the broad-cast, if it had been earlier put in; but the hoes, as they increase the growth of the plants, prevent their ripening in season; or if it had been all drilled in rows but 10 inches asunder, at the time it was put in; for then the 16 rows on the same quantity of land, being double the eight rows, would have produced,

The broad-cast was only B. 9 0 3 2
8 2 0 4

So that the advantage in
favour of drilled, besides
feed saved, would have
been 0 2 2 6

And he farther remarks, that the deep horse-hoeing of the intervals of this drilled barley, appearing not to do service to the crop, might be owing to the short time that grain continued in the ground; for on the contrary, it appears by the produce

466 THE FARMER'S TOUR

of the drilled wheat, (*Experiment, No. 15.*) that 12 ridges, with double rows and horse-hoeing intervals, produce a trifle more than so many ridges of the same width sown with equidistant rows, 4 and 5 on a ridge, besides saving more than half the seed, and the land being left after the horse-hoed crop, 20s. *per* acre better than the other for any ensuing one. The result from which experiment gives the preference to drilling wheat in the *Tullian* method against equidistant rows, in which way the corn cannot have that benefit from the horse-hoe it wants in the spring.

Experiment, No. 22.

Soil a poor clayey, hilly land. *March* 31, 1768, drilled three quarters of an acre with $2\frac{1}{4}$ pecks of barley in equidistant rows, one foot asunder: hoed the rows with a small shim drawn by hand.

The produce 20 bushels one

peck, which is *per* acre, $2\ 3\ 3\ 0$
Seed, $0\ 0\ 3\frac{1}{4}$

Clear crop, $3\ 2\ 0\frac{1}{4}$

THROUGH ENGLAND. 467

Experiment, No. 23.

*Culture and expences of two acres of drilled
barley.*

1770.

Culture.

In the same field on two ploughings, drilled 16 ridges 6 feet wide, with 2 rows on each, one foot asunder; three pecks and an half of duck's-bill barley feed.—Horse-hoed the intervals once; and hand-weeded the rows once.

Expences per acre.

Two ploughings,	-	£. 0	8	0
Harrowing,	- - -	0	0	6
Drilling,	- - -	0	0	9
Seed,	- - -	0	2	9
Horse-hoeing,	- - -	0	2	0
Hand-weeding,	- - -	0	0	11
Reaping,	- - -	0	2	1
Harvesting,	- - -	0	2	3
Rent and tythe,	-	0	7	6

DRILLED OATS.

Experiment, No. 24.

*Culture, expences, and produce of one third
of an acre of drilled oats.*

1767.

Culture.

The soil the same as No. 21. cropped with wheat in 1766. It was ploughed

H h 2

twice;

468 THE FARMER'S TOUR

twice; and on the 11th of May, 1767, drilled with oats; 4 rows, 2 feet asunder; and 8 rows, 10 inches asunder, with $2\frac{1}{2}$ pecks and 1 pint of seed: At the same time sowed the same quantity of land adjoining, broad-cast, with 3 bushels of seed.

The drilled grew much the strongest. The drilled part had one horse-hoeing.

Produce.

	B.	P.	G.	Pr.
Of the drilled—4 rows, -	4	1	0	0
8 ditto,	5	2	1	0

	9	3	1	0
Seed, - - -	0	2	1	1

Clear crop, -	9	0	1	7
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Of the broad-cast,	10	1	0	4
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Seed,	3	0	0	0
	7	1	0	4

Superiority of the drilled,	1	3	1	3
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Clear produce per acre drilled,	27	2	1	5
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Ditto of the broad-cast,	21	3	1	4
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Superiority of the drilled,	5	3	0	1
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THROUGH ENGLAND. 469

Account of the drilled per acre.

Expences.

Two ploughings,	-	-	£. 0	8	0
Harrowing,	-	-	0	0	6
Drilling,	-	-	0	1	0
Seed,	-	-	0	3	2
Horse-hoeing,	-	-	0	1	0
Hand-weeding,	-	-	0	2	0
Reaping and harvesting,	-	-	0	6	0
Threshing,	-	-	0	3	8
Rent,	-	-	0	7	6
			1 12 10		

Produce.

29 Bushels, 2 pecks, and 1 gal-					
lon, at 1 s. 6d.	-	-	£. 2	4	1
Straw,	-	-	0	8	0
Expences,	-	-	1	12	10
Profit,	-	-	0	19	3

Account of the broad-cast.

Expences.

Ploughing and harrowing,	£. 0	8	6
Sowing,	0	0	3
Seed,	0	15	0
Weeding,	0	10	0
Carry over,	1	13	9
H h 3			

470 THE FARMER'S TOUR

Brought over,	-	£. 1	13	9
Mowing and harvesting,	-	0	5	0
Thrashing,	-	0	3	10
Rent, &c.	-	0	7	6
			2	10
				1

Produce.

30 Bushels 3 pecks, at 1s. 6d.		2	6	1
Straw,	-	0	6	0
			2	12
				1
Expences,	-	2	10	1
Profit,	-	0	2	0
Drilled,	-	0	19	3
Broad-cast,	-	0	2	9
Superiority,	-	0	17	3

Observations.

There have been very few experiments made on drilled oats; and the general opinion concerning this mode of cultivating them, is to its disadvantage; but this trial shews plainly that, on certain soils, drilling will exceed the broad-cast method, both in product and clear profit; and if the cleaning the land gets in one case, and the contrary

THROUGH ENGLAND. 471

contrary effect it experiences in the other, be taken into the account, the superiority in this trial will be found considerable.

DRILLED BEANS.

Experiment, No. 25.

The soil a rich feint-red loam, tending to clay.

March 23, 1767, planted one third of an acre in a promiscuous manner, according to the old method of the country, with 1 bushel, 3 pecks, and 3 quarts of horse-beans.

And drilled another third of an acre in double rows, at 1 foot asunder, with $2\frac{1}{2}$ feet intervals; using 1 peck and 1 quart of seed.

But Mr. *Anderdon* remarked that they were drilled too thin and deep. They were horse-hoed twice, and hand-hoed once. *June* 26th, the planted beans were higher than those drilled. *July* 25th, examined the crop; those planted had in general but 4 or 5 pods on a stalk, many but 2 or 3. Those drilled had, in general, 10 or 12, many 20 or more; and on one he reckoned 32 good pods; and on another 45.

472 THE FARMER'S TOUR

September 24, cut the planted beans;
and October 2d, pulled the drilled ones.

	B.	P.	Q.	Pt.
Produce of the planted,	11	3	5	0
Seed, -	1	3	3	0
Clear crop, -	10	0	2	0
	B.	P.	Q.	Pt.
Produce drilled, 5	0	4	1½	
Seed, 0	1	1	0	
			4	3 3 1½
Superiority, -		5	0	6 0½
Or per acre -		15	2	2 1½

Account of the drilled per acre.

Expences.

Two ploughings, -	£. 0	8	0
Harrowing, -	0	0	6
Drilling, &c. -	0	0	9
Seed, 3 pecks and 3 quarts, at 4s. per bushel, -	0	3	4½
Horse-hoeing, -	0	2	0
Hand-weeding, -	0	1	6
Pulling, harvesting, &c. -	0	8	6
Thrashing, -	0	2	4
Rent and tythe, -	1	3	0
	2	9	11½

Produce.

15 Bushels, 1½ peck, at 4s. £.	3	1	9
Straw, -	0	6	0
	3	7	9
Expences, -	2	9	11½
Profit, -	0	17	9½

THROUGH ENGLAND. 473

Account of the planted per acre.

Expences.

Ploughing and harrowing,	£.0	8	6
Seed, 5 bushels, 2 pecks, 1 quart,			
at 4 s.	-	1	2 1 ½
Planting, at 1 s.	-	0	5 6 ¼
Weeding,	-	0	3 0
Cutting and harvesting,	-	0	10 0
Thrashing,	-	0	5 4
Rent, &c,	-	1	3 0
		3	17 5 ½

Produce.

35 Bushels, 2 pecks, and 7 quarts,			
at 4 s.	-	7	2 10 ½
Straw,	-	0	12 0
		7	14 10 ½
Expences,	-	3	17 5 ½
Profit of the planted,	-	3	17 4 ½
Ditto of the drilled,	-	0	17 9 ½
Superiority of the former,		2	19 7

Experiment, No. 26.

Soil a poor stiff clay. *April 25th, 1768,*
drilled three ridges, a quarter of an acre,
with 2 pecks and half a pint of horse-beans;
double rows; ridges 5 feet wide,

474 THE FARMER'S TOUR

	B.	P.	Q.	Pt.
They were horse-hoed, and				
produced, -	2	0	0	0
Seed, -	0	2	0	0 $\frac{1}{2}$
Clear crop, -	1	1	7	0 $\frac{1}{2}$
Product <i>per</i> acre, -	8	0	0	0
Seed, -	2	0	1	0
Clear crop, -	5	3	7	0

DRILLED PEASE.

Experiment, No. 27.

Soil a rich clayey loam, worth 20*s.* *per* acre. *March* 23d, 1767, drilled one third of an acre of grey hog-pease in double rows, at 1 foot; some with intervals of 2 feet, some 3 feet, with 2 pecks 1 quart $\frac{1}{2}$ of seed. At the same time sowed, broad-cast, another third of an acre with 3 pecks, 3 quarts and $\frac{1}{2}$ of seed. The drilled half was twice horse-hoed.

	B.	P.	Q.	Pt.
Produce of the broad-cast,	6	0	3	1
Seed, -	0	3	3	1
Clear crop, -	5	1	0	0
Drilled, -	3	1	6	1
Seed, -	0	2	1	1
Superiority of the broad-cast,	2	1	3	0

THROUGH ENGLAND. 475

	B.	P.	Q.	Pt.
Product <i>per</i> acre broad-cast,	18	1	2	1
Seed, - - -	2	2	2	1
Clear crop, - -	15	3	0	0
Product <i>per</i> acre drilled,	10	1	3	1
Seed, - - -	1	2	4	1
Clear crop, - -	8	2	7	0
Broad-cast <i>per</i> acre,	15	3	0	0
Drilled, - - -	8	2	7	0
Superiority of the former,	7	0	1	0

Experiment, No. 28.

*Culture and produce of three acres of drilled
pease.*

1768.

Culture.

The soil a heavy clay, worth 10s. an acre. Yielded, in 1767, broad-cast wheat, April 8th, on two ploughings, drilled it in double rows, at 1 foot, on 5 feet ridges, with 2 bushels, 2 $\frac{1}{2}$ pecks, and one pint of grey hog-pease; and at the same time, on one ploughing, sowed, according to the usual method of the country, $\frac{1}{4}$ of an acre adjoining, broad-cast, with the same quan-

476 THE FARMER'S TOUR

tity of the same pease. Horse-hoed the drilled 4 times; harrowed the intervals twice, and hand-hoed the rows once. The 20th of *July* the green fly appeared among all the pease, and destroyed most of them.

Produce.

		B.	P.	2.	Pt.
Of the drilled,	-	4	1	0	0
Seed,	-	2	2	4	1
Clear crop,	-	1	2	3	1
Or <i>per</i> acre,	-	0	2	1	0
Seed of broad-cast,	-	2	2	4	1
Produce only,	-	0	1	0	1
Loss on $\frac{1}{2}$ acre,	-	2	1	4	0
Or <i>per</i> acre,	-	3	0	5	0
Gain, <i>per</i> acre, drilled,	0	2	1	0	
Loss broad-cast,	3	0	5	0	
Superiority drilled,	3	2	6	0	

Mr. *Anderdon* remarks, on this trial, that "the produce of the drilled was more than four times as much as the broad-cast on the same quantity of ground, and the seed but one quarter as much, and the difference

THROUGH ENGLAND. 477

rence in the haulm was more considerably in favour of the drilled. This summer was remarkably wet, and many crops of beans and pease came to nothing."

DRILLED TURNIPS.

Experiment, No. 29.

Soil, a rich, but heavy, clayey loam. "The 19th of July, 1769, (says Mr. *Anderson*) I drilled nine single rows, four feet asunder, making one third of an acre, with turnip seed: thinned them where too thick, and where too thin filled up by transplantation: hand and horse-hoed them. The last week in *February*, 1770, gave a truck full, (a one-horse cart on a sledge) containing 2 *C. wt.* 3 quarters, 6 *lb.* to the ewes and lambs, the 9 rows containing 16 trucks, or 2 ton, 4 *C. wt.* 3 quarters, 12 *lb.* served 50 couples, and as many store sheep, (together with hay, and what grass they could pick) a fortnight.

Say 100 old sheep, and the assistance they had from these turnips, at this season of the year, was worth 3*d.* per head, or 1*l.* 5*s.*; the value of an acre would be 3*l.* 15*s.* or if valued by the ton, supposing each worth 10*s.* 6 ton, 14 *C. wt.* 2 quarters,

478 THE FARMER'S TOUR

ters, would be worth 3*l.* 7*s.* 3*d.* The 50 couples had a truck, or 2 *C. wt.* 3 quarters, 6 *lb.* a day, for twelve days, which was for those days a little more than 6 $\frac{1}{4}$ *lb.* per day for each couple, which, my shepherd says, Mr. *Anderdon* remarks, would be a sufficient allowance, with hay, throughout the winter; at which rate, an acre of turnips, producing 6 ton, 14 $\frac{1}{2}$ *C. wt.* would maintain 50 couples 48 days, or six weeks and six days. But I think this allowance too little, my ewes weighing 12 pounds a quarter, or upwards, when lean. The largest of these turnips were between 9 and 10 *lb.* each.

TURNIP CABBAGE.

Experiment, No. 30.

In *March*, 1768, sowed some seed of this plant, and transplanted into a field of poor clay ground, in *June* and *July*. The produce was not great, few weighing more than between 2 and 3 *lb.* each; but they kept sound and without any mealiness till *May*, 1769, and sheep were fonder of them than of turnips.

REYNOLD'S CABBAGE TURNIP.

Experiment, No. 31.

Soil, a rich heavy, clayey, loam; drilled 15th and 19th *July*, several ridges and plots of land with this seed in equally-distant rows, some $2\frac{1}{2}$ feet, some 3 feet, some 4 feet asunder, some rows also of turnip cabbage, and some of both sorts planted. In *April*, 1770, began to use them. A basket full of turnip cabbage, planted 18 *July*, weighed 42 *lb.* and *Reynold's*, planted the 12th of *August*, 43 *lb.* They were given to ewes and lambs, who eat them very freely. The turnip cabbage producing as above, would be to an acre 3 ton, 11 *C. wt.* 2 quarters, 24 *lb.*; and *Reynold's*, 4 ton, 16 *C. wt.* 2 quarters, 19 *lb.*

The 7th of *April*, one row, which was drilled the 19th *July*, was weighed, and the produce amounted to only half as much as of a row that was planted the 12th of *August*. The 12th, weighed a square perch of those drilled *July* 15, the weight 43 *lb.* If a whole acre was as good, it would produce about 3 tons. The largest root weighed but little more than 2 *lb.*

May

480 THE FARMER'S TOUR

May 2d, the ewes and lambs did not seem to like the roots of *Reynold's* turnips that were in blossom, and the coat of the roots grown hard; but at first they eat up the whole roots so clean, you could not find the smallest fibre left.

May 10th, weighed a perch opposite the perch weighed the 12th of *April*. The produce $123\frac{1}{2}$ lb. which is but $5\frac{1}{2}$ lb. short of treble the weight of the other perch. The weight of the largest root and branch $6\frac{1}{2}$ lb. the root only $1\frac{1}{2}$ lb. This shews the advantage of eating this vegetable the end of *April*, or beginning of *May*, but before they are in blossom. The leaf looks now as green as ever, and the sheep eat it freely now.

June 4, Mr. *Anderdon* remarked, that "this field, having been double trenched, I was going to spread a light dressing of quick lime over it, and did carry some to correct the rawness of the under stratum, which was now at top, much of it in large hard clods; but splitting them accidentally with a spitter, I observed them to be intermixed with lime, and on examining further, found it the general case over

the field; upon which I ordered the clods to be broken with clodding beetles, and no more lime to be carried, that being done to my hands. Hence I conclude, that when land has been long dressed with lime, and the staple is sufficiently deep, the lime which has sunk down may (like chalk) be recovered again, by ploughing a furrow deeper than usual; and if the under furrow of earth be but indifferent, if ploughed up before, and permitted to lie rough all the winter, it may doubtless be so mellowed, as to become an improvement for the future."

Observations.

From these minute remarks on the turnip-cabbage of both sorts, it appears plainly, that in duration they are infinitely valuable, keeping perfectly good till in blossom; and the great profit of leaving them till late in the spring, appears from the weight of food being five times as great as when the root alone is to be had.

The drill plough which Mr. *Anderdon* has used, among others, is the following invented by Mr. *Willey*. See Plate XXVII.

482 THE FARMER'S TOUR

		Feet.	Inches.
From	1 to 2	5	8
	1 to 3	1	6
	3 to 4	1	4
	1 to 5	2	2
	6 to 7	2	0
	8 to 9	1	4
	9 to 10	0	4
	9 to 12	1	6
	8 to 15	0	11
	13 to 14	1	3
	11 to 12	0	4

Diameter of great wheel 2 feet.

Ditto of feed box (16) 8 inches.

Ditto of the wheels (17) 7 inches.

The breadth of the feed box $3\frac{1}{4}$ inches.

The ditto of the wheels (17) 2 inches.

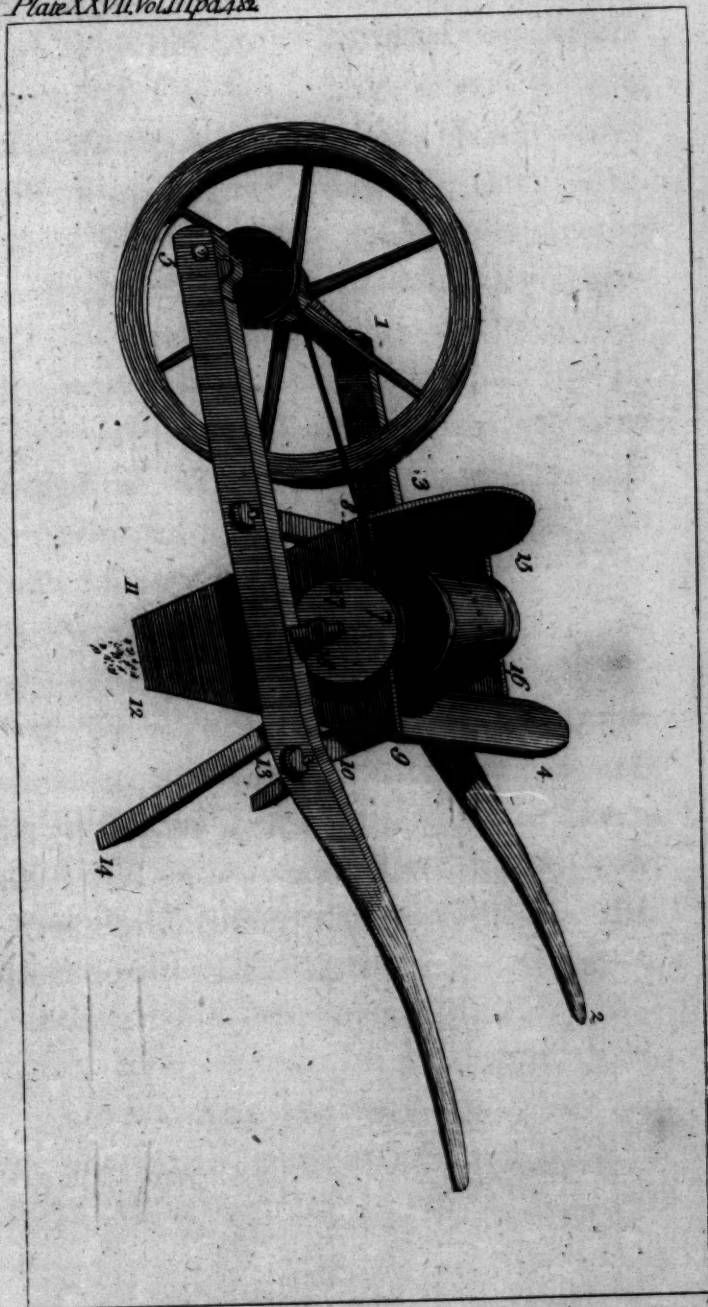
N. B. The handle is 7 inches on this side the hopper, which hangs down in the center—

The iron axle (18) goes through the feed box, and takes in and out of the iron, on the handles, at pleasure, to change the feed box for various sizes.—This sized hopper not wide enough for a bean feed box in drilling long rows.

The price complete, 12s. 6d.

This gentleman since writes me on the drill culture in general.

“ As





“ As a friend to frequent ploughings and drilled crops, I know not how to conclude this without observing that after two drilled ones my stiffest land (and there is none much stiffer) has been ploughable, and actually ploughed by two strong horses only, which observation does not appear among my experiments.—Nor is it less true, that from my avocations to other business, my drilled crops have seldom been sown in season, and it is now the case with my intended 3d successive wheat crop, which I should have put in, if my horses, &c. had been at leisure, before *Michaelmas*. ”

The merit of these experiments is too great to make any panegyrick necessary; let it suffice to remark, that Mr. *Anderdon* has proved himself a most accurate and attentive farmer; his trials have been equally well planned and executed; nor can they fail of being truly useful to the public.

"As a friend to frequent ploughings and drilled crops, I know not how to conclude this without observing that after two drilled ones my richest land (and there is none much richer) has been ploughable, and actually ploughed by two strong horses only, which observation does not appear among my experiments.—Nor is it less true, that from my avocations to other business, my drilled crops have seldom been sown in season, and it is now too late with my intended 3d successive wheat crop, which I should have put in, if my horses, &c. had been at leisure, before Michaelmas."

The merit of these experiments is too great to make any panegyric necessary; let it suffice to remark, that Mr. Anderson has proved himself a most accurate and attentive farmer; his trials have been equally well planned and executed; nor can they fail of being truly useful to the public.